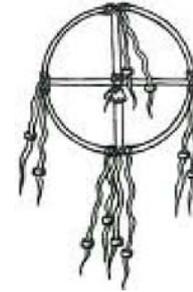


HEIRLOOM SEEDS OUR CULTURAL PAST



United States Department of Agriculture
Natural Resources Conservation Service

**Natural Resources Conservation Service
Louisiana Many Field Office
District Conservationist E. John Rogers
1st Revision – October 24, 2011**



American Indian Proud

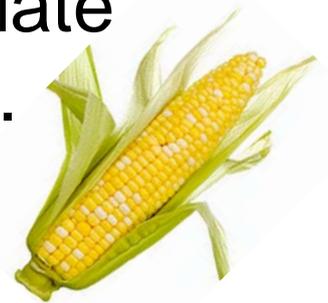


Have you ever wonder where your food comes from? Well thank the American Indians (North, Middle and South America)! Over 60% of all the food that the entire world eats today was originated and developed by American Indian people? It's true!



A Sample of American Indian Food Contributions to the World

Edible plants domesticated by Indians have become major staples in the diets of peoples all around the world. Some of the foods for example were corn (maize), wild rice, potatoes, sweet potatoes, peanuts, squashes and pumpkins, tomatoes, papayas, sunflower seeds, avocados, pineapples, guavas, chili peppers, chocolate (cacao), and numerous species of beans.



What are Heirloom Seeds?



It's said that a variety of heirloom seeds needs to be at least 50 years old to be considered an heirloom.

A very old heirloom is the **1500 Year Old Cave Bean** found in a sealed clay pot in a cave in New Mexico, U.S.A. Thought to be left by the Anasazi Indians, this bean seed still germinated after all that time.

Heirlooms vs. Hybrids



The majority of heirloom seeds are open-pollinated, meaning that they reproduce themselves from seed. The plants from these seeds grow true to that variety. When they are grown they will be the same as the parent plant.

Hybrids are a cross between two varieties but, the seeds from hybrids are either sterile or revert back to one of the original varieties. They won't be the same as the parent plant.



Connection to Our Past



Heirloom Seeds are grown today to keep people in touch with their ancestry. They offer a wide variety of sizes, tastes, colors and shapes, than the hybridized varieties bred to meet the needs of the commercial growers do.

Saving the Past



There are numerous tribes, as well as many non-profits, that are trying to recover seeds and foods with American roots that American Indians relied upon for centuries





On the Verge of Extinction

Over the last quarter century, Native Seeds/SEARCH and the Seed Savers Exchange have rescued hundreds of varieties of Native American corn, beans and squash on the verge of extinction.



Maintaining Tradition



The Zuni, Hopi, Iroquois Six Nations, and other tribes are now maintaining their own seed banks of their historical and cultural plantings.



Reasons for Saving American Indian Heirloom Seeds



There are two good reasons why every American Indian Tribe should be reviving their cultural food traditions.



- First, the ceremonies, songs and stories of many tribes are linked to the planting and harvesting cycles of particular crops.
- Hybrid seeds have no place in a tribes' cultural past.

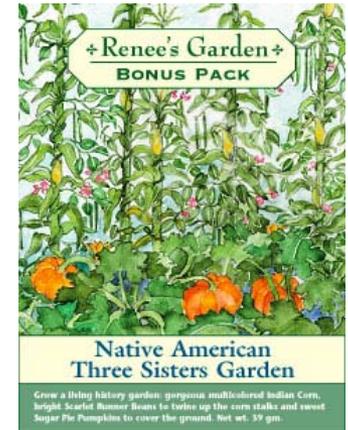
The Rise of Diabetes

- Secondly, and even more importantly is that these foods are desperately needed by the many Native American communities due to diabetes, a disease unknown to American Indians born before 1900. The rise in diabetes on reservations and with people with American Indian heritage can be connected to the abandonment of traditional diets.
- Nutritionists call these "slow release foods such as" - beans, cactus fruits, camas, acorns, mesquite and roasted mescal that are slowly digested and absorbed in ways that enhance insulin sensitivity.



Three Sisters

In Native American lore corn was one of the "three sisters". Along with beans and squash, the three sisters were planted and grown together, supporting each other in their lifecycle and providing a very balanced diet of carbohydrates, proteins and vegetable fats to their cultivators.





Corn stalks were support for climbing beans planted around them. Beans are legumes and fix atmospheric nitrogen (a necessary nutrient) into forms usable by the corn. The large leaves of the squash and its spreading vines shade the ground and help keep it cool and moist.

Succotash



Succotash is said to be one of the first recipes the Algonquin Indians taught the settlers at Plymouth Rock. If this is so, then the early versions was made without lima beans because they are a warm weather crop.

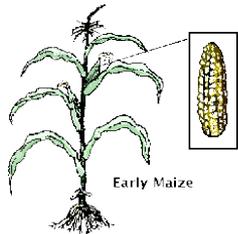
Succotash was also made by the Narragansett Indians, who called it “misckquitash”, which means “boiled corn”.

It is notable that the two primary ingredients are two of the Three Sisters – beans, corn, squash — the main agricultural crops of many Native American tribes.

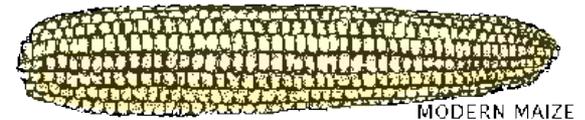
Corn/Maize



Domesticated along the Rio Balsas of Mexico about 2000 B.C. by Meso-Americans, corn is a staple food and has many ritual uses. Various kernel colors are selected for ceremonies and feast foods, and pollen is collected for ceremonial and medicinal purposes.



Corn/Maize Facts



Native American corn was the genetic foundation of all other corn varieties.

- Columbus was one of the first Europeans to see maize or corn.
- The Pueblo Indians were raising irrigated corn in the American Southwest when Coronado visited in 1540.
- The settlers at Jamestown were taught how to raise it in 1608 and in 1620, it helped to keep the Pilgrims alive over winter.
- Corn cobs were found in Tehucan, Mexico that date back 7000 years.

Heirloom Corn



Heirloom corns offer a wide choice of plant types, color and taste. Heirloom Corns, Popcorn's and Flour Corns include Black Mexican, Hopi Blue Flint, Hopi Yellow and Mandan Bride as well as others.

Native American Origins of Corn/Maize



Many Native American traditions, stories and ceremonies surround corn. In New England there are many variations on how maize was brought or introduced to Native Americans here. Generally in southern New England, maize is described as a gift of “Cautantowwit”, a deity associated with the southwestern direction; that kernels of maize and beans were delivered by the crow, or in other versions the black-bird.

Responsible for bringing maize, the crow would not be harmed even for damaging the cornfield. Other Algonquian legends recount maize was brought by a person sent from the Great Spirit as a gift of thanks.

Corn and Culture

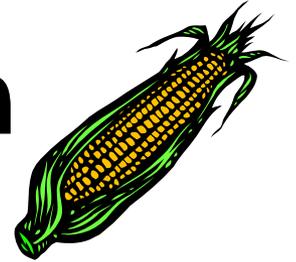


Corn is important in ceremonial events, and various colored kernels are selected for ceremonies and feast foods.

-Hopi blue *Sakwapu*, for instance, is ground to make ceremonial *piki* bread.

-Hopi farmers plant plum-colored kernels of Hopi Greasy Hair "Wiekte," which matures early, so the harvest is ready for the Home Dance ceremony in July.

Native Americans and Corn



New England tribes from the Mohegan in Connecticut to the Iroquois in the Great Lakes region had rituals and ceremonies of thanksgiving for the planting and harvesting of corn. One ceremony, the Green Corn ceremony of New England tribes, accompanies the fall harvest. Many tribes also had ceremonies for seed planting to ensure healthy crops as well as corn testing ceremonies once the crops were harvested.

Heirloom Corn Varieties

**Following is a few varieties of American
Indian Heirloom Corn...**

Black Aztec Corn

Hopi Blue Corn

Hopi Pink Flour Corn

Mandan Bride Corn

Hominy Corn

Cherokee Long Ear Popcorn

Bear Island Chippewa Flint Corn

Seneca Red Stalker Corn

White Flint Corn

Oaxacan Green Corn

Bear Island Chippewa Flint Corn

A multi-colored flint corn with 8 to 12 rows of yellow, pink, white, red, blue and striped kernels. A good grinding corn. Originally collected from the Chippewa in north-central U.S.





Anasazi Sweet Corn

The originally seeds was obtained from a cave in New Mexico in a ceramic pot that had a lid and was sealed with pine pitch. The seeds were later planted an after sprouting and growing out, the corn revealed itself as a currently unknown strain of multiple colors sweet corn.

Black Aztec Corn



Originally grown by the Aztecs 2,000 years ago, Black Aztec is a link with the past when it maintain a whole civilization. This corn is delicious and drought tolerant, The medium-sized ears have a sweet corn taste in the white or "milk" stage and the ears will then turn a deep jet black when fully mature for drying at which point it is ground for flour. 85 days.

Cherokee Long Ear Popcorn



Cherokee Long Ear corn is more than a decorative corn, it can be ground into cornmeal, eaten like sweet corn, or popped and used in soups. Because of its wide range of usage it is a highly prized heirloom.

Cocopah Corn

A rare heirloom traced to the Colorado Mountain Indians in 1868. Sweet, fast growing with white kernels that turn shades of pink, blue, white and yellow when dry.



Hopi Blue Corn



At one time a traditional staple corn of the Hopi people. Hopi Blue grows 5-7' tall with purple/blue 9" ears. Can be eaten as sweet corn if picked young.

Source of blue corn flour. Makes amazing blue tortilla chips.

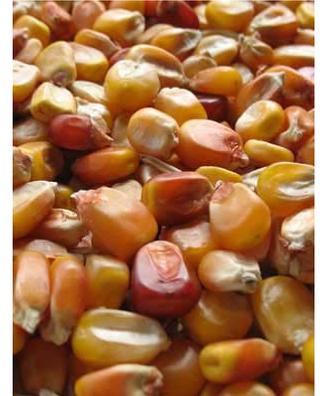
Hopi Pink Flour Corn



The Heirloom Pink Flour Corn is one of the best flour corns that can be grown. It is drought tolerant, grows 5-6 feet high, and produces 8" ears with beautiful pink (with some white and red occasionally flecked in) kernels. 85-95 days.

Wapsie Valley

An old Indian corn variety. In the old days at corn shucking it was tradition for a young man to be able to kiss the girl of his choice if he found a red cob while shucking. A very extremely high protein corn.



Seneca Red Stalker Corn



Grown by the Seneca Indian Nation of Western New York. Seneca Red Stalk is a highly ornamental corn with multicolor kernels and deep purple-red stalks and husks. Large 8"-9" ears; 100 days.

Oaxacan Green Corn



It has a smooth emerald green kernels on 6-10" ears. It has been grown for centuries by the Zapotec Indians of southern Mexico. They utilize it is to make green flour tamales. Drought resistant, 7' sturdy plants. Grown traditionally with squash and beans which climb up the corn stalks. 75-100 days.

Mandan Bride Corn



This corn originated with the Mandan Indians of Minnesota and North Dakota. Beautiful variegated coloration, including some striped kernels. In the past it was grown as a meal corn, today normally used as an ornamental. Ears are 6-8" long on 6' stalks. 85-90 days.

White Flint Corn



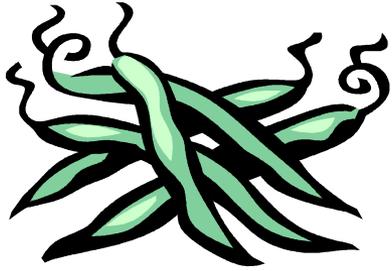
Heirloom White Flint Corn plays a very important role in the Oneida Tribes culture, and is even referenced in their Creation story. This was the corn that was brought to Valley Forge to feed George Washington's troops when the U.S. government could not get food or other supplies to their Army. The Oneida's brought them the corn from their village to keep the troops alive through the winter.



Hominy Corn



The Micmac Indians dried the cobs and removed the kernels, which were boiled with wood ash to break down the hard seed coat. The corn was then ground and used to make "hominy", which is a like corn porridge.



Beans

Native to the New World, beans are a traditional protein complement to corn, rich in minerals, with a variety of tastes and colors. Members of the legume family, beans fix nitrogen from the air if certain bacteria are present in the soil to infect the roots. Beans also contain soluble fiber helpful in controlling cholesterol and diabetes.



Bean Origins



Beans originate in Central and South America. They began to be farmed by people in Mexico more than 2000 years ago. There are over 4,000 different kinds of beans in North America today, but only about one sixth of them are available commercially. The rest are in private collections and gene banks.

Types of Beans



There are two basic kinds of beans:

bush beans that only grow a few feet tall, and climbing (pole) beans that grow vines up to 10 or 12 feet long. The original native beans were all climbing varieties, but today there are more bush beans than climbing beans because people have bred the plants to stay short for the convenience of growing and harvesting.

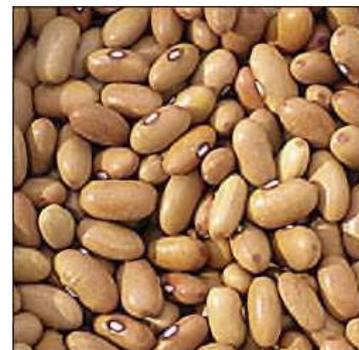
Anasazi Beans

(Anasazi Cave Bean, Aztec Bean, New Mexico Cave Beans, Appaloosa)

Claimed to have been reintroduced into production from specimens excavated in Anasazi ruins...that may or may not be true. Its more likely that the bean continued growing wild and was put back into cultivation from those wild seeds. They are perfectly adapted to the arid southwest and are tasty as a green snap bean as well as a dry bean.



Arikara Yellow Bush Bean



Arikara yellow bush bean originated with the Arikara tribe of North Dakota. A prolific plants produce yellow-tan seeds that are excellent for use as a dry bean or can be harvested young as a snap bean. Good drought tolerance. This bean is actually hard to find and threatened.

CHEROKEE TRAIL OF TEARS POLE BEAN



An heirloom bean from the Cherokee Indians. It was a bean carried by the Cherokee over the Trail of Tears. These shiny jet-black seeds will produce green 6" pods with purple overlay, good for snaps and dry beans

HIDATSA RED BUSH BEAN



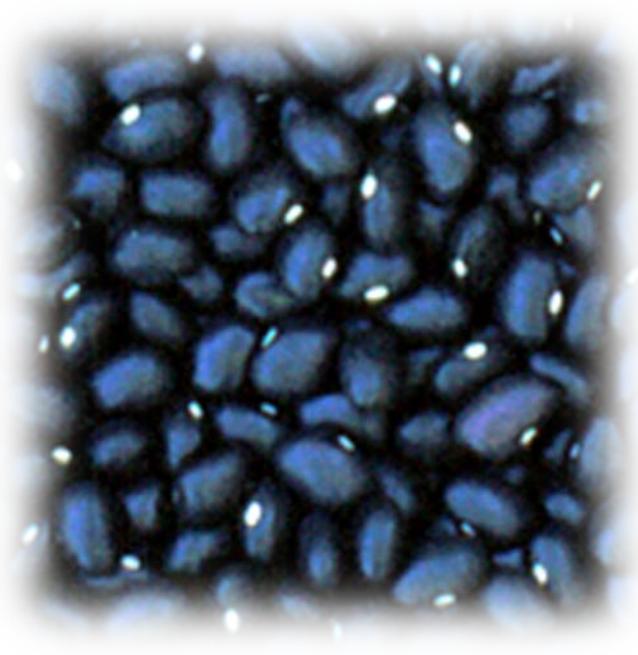
It was originally grown by Native Americans in the Dakotas. The dark red seeds are used as a shell bean or dry bean. The bush of this bean can climb to 3 feet if given support. 80-90 days.

Hidatsa Shield Figure Pole Bean



A bean that originated with the Hidatsa Indians of the Missouri River Valley of North Dakota. One of the most productive dry beans and has excellent taste! Pole habit, 90 days.

Hopi Black



Small, rounded, black, pole bean, dry or runoff-farmed by Hopi farmers. Can be used for dye.

Hopi Black Pinto Beans - "Maawiw' ngwu"

A very drought tolerant. The green beans remain tender even when the seeds form and have a fine flavor and texture.



Hopi Purple String

Heirloom from Hopi farmers. Smooth texture, thin skin, pleasant flavor. Good choice for chili or any Southwest cuisine.



Hopi Tan Lima

Seeds are tan with varied black markings. This bean likes hot weather. Bumblebees are the pollinators for this specie.



Hopi Red Bean



The beans taste nutty and cook to a smooth texture. Beautiful red pods at maturity. Low pole, almost bushy.

Hopi Yellow Bean

Deep yellow bean of the Hopi Tribe. Flavorful bean for making soup or chili.



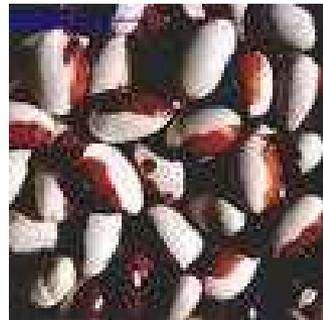
Hopi Yellow Bean, Lima (Pole)

Seeds ranges from deep yellow to dark orange, mottled with dark brown specks



Odawa Indian Bush Bean

Semi vining bushes with large leaves, white flowers and large pods.



OCTOBER BUSH BEAN



A Native American variety dating back to at least the 1830s from Cherchei Nation in Tennessee.

Pawnee Shell Bush Bean



From Native American Indians, this brown and white shell and soup bean resembles Jacob's Cattle



Seminole Bush Bean



A Native American snap bean proven in the test of time. The gorgeous chocolate-brown, dry beans are adorned with marbled, tan patterns.



Six Nations Bush Bean

A dry shell bean used by the Iroquois nation.



Yellow Indian Woman

Originally grown by Native Americans in Montana. This runner style pole bean is light yellow in color and is very flavorful.



Zuni Shalako Bean

Rare bean heirloom from the Zuni farmers of the southwest. Smooth texture and tender skin. A great choice for Southwest cooking.





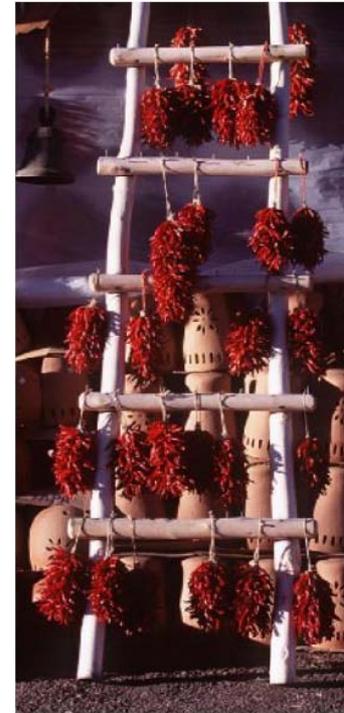
Blue Camas

(*Camassia quamash*)

A herbaceous perennial native to the Pacific Northwest. A major food of Native Americans, who would roast the camas bulbs in pits to bring out their sweet flavor. Flowers are a deep blue violet and are excellent for cutting.

Chiles

One of the great Native American contributions to the cuisines of the world is chiles. A widely used fruit high in Vitamin C, chiles vary in shape, size, color, pungency and flavor. All cultivated peppers were developed from plants native to Central and South America. This group comes in many forms, including some fiery fruits such as jalapeño and others with mild fruits such as bell peppers.





A Chile History



Peppers were one of the first crops grown by the Native Americans. The growing of peppers began over 10,000 years ago in the Americas. From Peru, up to New Mexico, these early Native Americans grew chili peppers for both their culinary, and medicinal benefits. There were three species, or species groups, of cultivated chiles in ancient America.

Numerous pepper fragments believed to be over 2,000 years old were found in Peruvian ruins. They used these peppers in their cooking, in their art work, and in the burial chambers of their nobles. Native American garments from the first century A.D. with pepper embroidery were unearthed near the coast of Peru.





Chile Used by Royalty

The Olmecs, Toltecs, and Aztecs cultivated and used peppers extensively. The mixture of chocolate and red chilies was a taste treat that was reserved exclusively for Aztec royalty.





Chile as Native Herbal Medicine

The Cherokee Indians utilized peppers in the treatment of colds, colic, and as a poultice to treat fever and gangrene. Powdered chili pepper was used by the Navajo on breast of their mothers to wean a nursing child.



Chiles Discovered by the World

Christopher Columbus on his first voyage found peppers being used by the indigenous peoples. Christopher Columbus is credited with naming them "peppers" because he thought they tasted like the Asian spice, peppercorn. He returned to Europe with plants and seeds and introduced them into Spain and Portugal. They then quickly spread around the globe.



Cochiti



A New Mexico native chile that is sweet when green, and flavorful when red.

Chimayo



This native New Mexico chile matured earlier than most chiles.

Potatoes

Archaeologists have found remains of potatoes that date back to 500 B.C. in the ruins of Peru and Chile. The Incas grew, ate, and also worshipped “papas” or as we know them potatoes. Potatoes were even buried with the dead. The ancient potatoes of the Inca had dark purplish skins and yellow flesh.



Sweet Potatoes



Sweet potatoes are native to the tropical parts of Central and South America. They were domesticated around 5,000 years ago. The sweet potato (*Ipomoea batatas*) is a plant that belongs to the family Convolvulaceae. The sweet potato is botanically very distinct from the other vegetable called a yam, which is native to Africa and Asia. It belongs to the monocot family Dioscoreaceae.



Sunflowers



The sunflower is native to North America. The seeds were used by early North American Indians for food, eaten raw or roasted and pressed to make oil. The black-seeded variety is used for basketry dye material by the Hopi.

The Incas of Peru were sun worshipers that utilized flowers in their religious ceremonies.



Amaranth

Amaranth, an ancient crop originating in the Americas and grown by the Aztecs and by Southwest Indians. The small grain is rich in lysine and the young leaves are high in calcium and iron.

The largest acreage grown was during the height of the Aztec civilization in Mexico in the 1400's.





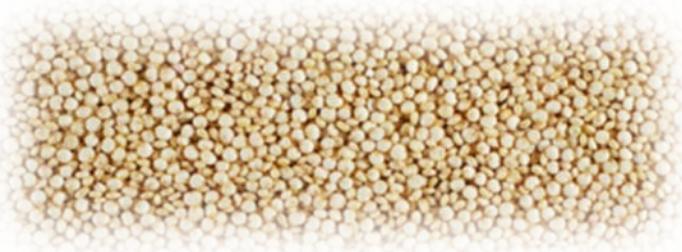
Guarijio Grain

A white-seeded grain used for tamales, pinole or popping.

Hopi Red Dye



"Komo." The Hopi make a scarlet natural food dye from the flower bract to color "piki" bread. Black seeds are edible and young plants can be eaten as greens.



Quinoa



Quinoa was a staple crop of the Incas. The Incas called it "the mother grain." Today it's an important food in South American cooking. Quinoa has more protein than any other of today's grain. Each year at planting time it was traditional for the Inca leader to plant the first quinoa seed using a solid gold shovel!

PERUVIAN PINK QUINOA



The young greens are edible as well as the seed. A principle crop for the Incas who believed it sacred. Although very similar to Amaranth, Quinoa is a cool weather crops, whereas Amaranth is a warm weather crop.



Red Aztec

Red Aztec (*Chenopodium berlandieri*), also known as Huauzontle, Red Spinach, Red Goosefoot. An important food crop for the Aztecs and other ancient peoples. Similar to Lamb's Quarter's in its growth habit, fiery red seed heads form on 4' stalks. Versatile - you can use fresh in salads, or saute in onion and garlic, or dip in batter. The bright red color is retained after cooking. Loves hot weather and won't bolt. 40 days for fresh greens; 60-100 days for cooked. Related to quinoa.

Rice Blue Bonnet



A traditional rice grown by native Mayan people who call it "Blue Bonnet". This is an upland rice variety as it does not need to be flooded and can be grown in regular garden soil.

Manoonim/Wild Rice



Manoonim or wild rice, in the oral history of the Anishinaabeg in Minnesota is a gift from the Creator, and is a centerpiece of the nutrition and sustenance of their community. For generations, each September people set out in canoes to harvest the wild rice, an aquatic grass from the remote lakes of northern Minnesota



Manomino



Wild rice is a member of the grass family (Poaceae) and has been eaten by people since prehistoric times. Early North American inhabitants, especially the Ojibway, Menomini, and Cree tribes in the North Central region of the continent, used the grain as a staple food and introduced fur traders to wild rice.

“Manomio”, the name they gave wild rice, ***“means good berry”***. There are four varieties of wild rice.

Palmer's Salt Grass



Grows in the Sonoran desert of Western Mexico, and produces a grain with some similarities to wheat. Originally a major food source of the Cocopah tribe in the western United States.

A 2006 United Nations Environment Report says of the plant: "It is a strong candidate for a major global food crop and could become this desert's greatest gift to the world."

Sonoran Panic Grass



A native domesticate of the arid American Southwest. The grass is used as a forage and the tiny seed harvested for grain. One can utilize panic grass seed by replacing a quarter to half of the flour in recipes with finely ground seed.

Sonoran panic grass was once a staple of Lower Colorado River tribes. Caches of this grain have been found where the Mohave or Quechan Indians stored them in the Trigo and Chocolate Mountains north of Yuma. A very rare grass.

Squash



Squash also originate in Central America and have been used by indigenous peoples there for thousands of years. The earliest squashes were probably very small and bitter, and may have just been used for their edible seeds. Some tribes used squashes for making bowls and spoons, probably long before they used them for food.



White Bush Scallop

A very ancient native American heirloom squash, grown by the Northern Indians for hundreds of years, this type was depicted by Europeans back to 1591, and one of the best tasting and yielding varieties still around today! Great fried and baked. Flat fruit with scalloped edges, beautiful!



Boston Marrow Squash



A 10-20 lb fruit are brilliant red-orange in color
Reddish orange skin,
excellent eating qualities,
fine grained, sweet flesh.
This variety came to be
grown in the Buffalo, NY
area after a tribe of Native
Americans traveled
through the area and gave
away seeds to the locals.

Choctaw Sweet Potato

Rare heirloom of the Creek and Choctaw nations. 5-15 pound oval shaped fruit borne on 20ft. vines. Fruit is a deep orange and has a taste reminiscent of sweet potatoes. Great for pies.



Hopi Black Green Squash



A colorful unique native Hopi Indian variety. The fruit weigh 15 lbs. and are pear shaped; they have a deep green skin color and yellow flesh. A good squash for warm climates.

Hopi Orange Winter Squash



This squash is large, with dark orange fruits and yellow flesh that is tasty for baking. Another addition to our food source from the Hopi.

Hopi Pale Grey



The 10 lb round orange flesh fruit is both sweet and dry. Vines are large and vigorous. A Southwestern heirloom from the Hopi people that has nearly become extinct in recent years.

Lakota Winter Squash



Lakota a very colorful squash. Fine-grained orange flesh is sweet and nutty. A food gift from the Lakota Indians



Silver Edge Squash

Silver Edge Squash (*C. argyrosperma*) is a Native American heirloom that is grown for its remarkable large and tasty silver-edged seeds which are roasted for pepitas or used in pipian sauce. The striped fruit has a good storage life; 90-95 days.



Texas Indian Moschata



Rare heirloom. Texas Indian Moschata is an unusual, rich-tasting variety. Slightly flattened 10-15 pound fruits resemble a pumpkin. A uniquely smooth, light tan moschata.

Zapalo Plomo Squash



Very rare ancient variety that is claimed to be the inspiration for topaz colored jewelry of ancient early American civilizations.

A dense cucurbit, its name translates to 'leaden squash'. It has interesting scarring on bluish-gray skin and is also a fine squash for eating.

Seminole Pumpkin



SEMINOLE (*C. moschata*) is an American native grown by the Seminole Indians of Florida and "discovered" by Spanish explorers growing wild during 1500s. It is a pumpkin which actually loves warm humid climates such as the Everglades where it can still be found growing wild. The teardrop to flattened globe-shaped fruits grow only to 3 pounds and approximately 7" in size with buff skin tinged green and deep orange flesh. 95-100 days.

Tomati By Name

Our word "tomato" is only a minimum change from "*tomati*", the word used by the Native Americans of Mexico. These Indians have grown the plant for food since prehistoric times. Other variants of Indian words reported by early European explorers used for tomatoes were *tomatl*, *tumatle*, and *tomatas*.



Tomato History



Cultivated tomatoes appear to have originated in its wild forms in the Peru-Ecuador-Bolivia area of the Andes. The tomato does not like cold weather and extremely hot or dry weather, a characteristic that reflecting the nature of the climate of the area it originated.



It appears that the cultivated species of tomato was carried from the Andes northward into Central America and Mexico by a prehistoric migration of Indians. Since few primitive forms of tomato are found in Central America and Mexico compared with the number in South America. This likely occurred in the last two thousand years.



Cherokee Purple Tomato

This tomato has dusky red-purple color with green shoulders and has a wonderful sweet flavor. It's said that this tomato was grown and favored by the Cherokee Indians for hundreds of years. A productive plant that produces large crops.



MANYEL

Perfect, yellow globes, 10-16 oz. Has a slight sweet taste and lemony flavor. Said to be of Native American origin, **Manyel** means "**many moons**".



ZAPOTEC TOMATO

This heirloom variety comes from the Zapotec Indians of Mexico. A very large ridged pink tomatoes that ripen to a deep red and have a sweet flavor. Delicious stuffed or sliced. Indeterminate. 80 days from transplant.



Zuni Tomatillo



The small sweet fruit have been semi-cultivated by the Zuni of northern New Mexico for more than a century.



Peruvian Goldenberry

(*Physalis peruviana*)
Giant Ground Cherry

A cultivated crop since Incan times native to the Andes. Nutritious golden fruit which is loaded with vitamin A, C and B. Contains unusually high levels of pectin and phosphorous.



Honoring Our Ancestors



**Heirloom seeds are links to our ancestors.
We honor our ancestors when we plant the
seeds into mother earth's soil and she
repays us with nourishment.**

