

7-Prehistoric Farming

High Desert Farmers of the Southwest



The Early Farmers

The Sinagua of the Verde Valley mastered the art of dry farming by building extensive agricultural field systems cleverly designed to overcome limited rainfall, drought, thin soils, and drying winds.

Dry farming by the Sinagua involved carefully planting where natural rainfall gathered or could be diverted. They also enhanced/preserved the effect of the rainfall with gridded gardens and rock mulching. They also planted seeds deep instead of shallow to take advantage of the moister soil still available from winter rains.

Introduction of Maize

Maize dates back more than 7000 years in Mesoamerica. Domesticated maize served as a supplementary food for Archaic hunter-gathers in the Southwest for a 1000 years before it became a dietary staple by about 3300 years ago.



Corn cobs

Similar to Hopi maize, three different colors of maize kernels were found at the Dyck Cliff Dwelling - yellow, red and blue/purple. In addition, maize cobs at the Dyck site contained a wide variety of row numbers including 8, 10, 12, 14, 16 and 20 rows. Some of the maize at this site was identified as the popcorn type, which has a dense outer layer that protects against insect damage.



The Rimrock site consists of three natural alcoves in the limestone cliff, two of which have a large open face and the third is an enclosed cavern. The larger part contained several cobble-wall rooms, including living rooms and storage cists. Nearby is another alcove. All together there appears to be 8 to 10 rooms within the cliff dwelling.

Beans and Squash

At least three different species of squash were found in the Dyck Cliff Dwelling - *Curcubita pepo* (e.g., acorn or zucchini), *Curcubita argyrosperma* (green-striped Cushaw), and *Curcubita moschata* (butternut). The green-striped Cushaw has a hard shell that allows the squash to preserve over winter and can be used for containers. Bottle gourds also were recovered from the Dyck site.



Beans from the Dyck Cliff Dwelling

Beans were grown in the Southwest for the last 3000 years. The Sinagua grew a variety of beans, including common beans, tepary beans and lima beans.

Cotton

Cotton was brought into the Southwest between AD 100 and 500. Early cotton required a warm climate and a long growing season. The Hohokam probably introduced cotton to the Sinagua. It took several centuries before a variety of cotton was developed that could grow in the northern regions of the Southwest, perhaps as late as AD 1000. The Verde Valley has a climate that was conducive to the successful production of cotton. The Sinagua are known for their fine cotton textiles.



Sinagua textile with a tie-dye pattern of corn or a snake, both sacred symbols.

Amaranth

Amaranth is a tall, weed-like plant that has large numbers of edible seeds. Some species of amaranth were used as a red dye by the Hopi and the Sinagua also appeared to have used amaranth as a red dye for their textiles.



Amaranth seed pouch from the Dyck Cliff Dwelling

A large collection of domesticated amaranth seeds was found in a red-dyed cotton bag tied with yucca cordage in the Dyck Cliff Dwelling.

Water Management

Native Americans survived for centuries in the desert by harvesting rainwater to grow their crops. Three ancient traditions in water conservation allowed them to collect all the moisture they could and hold onto it for as long as possible.

One method was to create **gridded gardens**. These grids were several inches high and made with soil and rock. Each depression in the grid would catch rainfall and holds water close to plant roots.



Another technique of dryland farmers was to build simple **rock check dams** placed in washes. Farmers would have planted behind the check dams or used them to divert water to a location nearby where crops were planted.

The Dyck Cliff Dwelling Farmers and Gatherers

A wide variety of plant remains were recovered from the Dyck Cliff Dwelling reflecting the rich habitat located in the area. These plants include both cultivated domesticates and wild plants. Botanical remains show that the inhabitants had a diverse diet that included corn, squash, gourds, beans, acacia beans, agave, yucca, walnuts, piñon nuts, acorns, mesquite pods, wild grapes, and cotton seeds.



Squash seeds from the Dyck Cliff Dwelling

This plaque is sponsored by Dean and Kathi Olson