

TRADITIONAL CROPS OF THE DRY LANDS

The traditional crops of indigenous farmers are one of the most promising sources of plant material for dry land agriculture. North American heritage is particularly rich. This section of the Drylander will highlight one of these crops each issue.

Hopi Corn

Corn has been cultivated in the Southwest for more than a thousand years. Over the centuries Hopi farmers have developed varieties and cropping methods that produce yields consistently without irrigation. These varieties of corn may be of great value in other dry land regions because of their unique adaptation to this environment.

The Hopi corn sprout has a deep thrusting radicle rather than the seminal roots of modern varieties and a mesocotyl that is 2 to 3 times as long as modern varieties. These and other

characteristics adapt it to the dry farming system of the Hopi.

The seed is planted 3" deep at the bottom of a larger 10" deep hole. As the stem rises the hole is filled in around it. The sandy surface layer acts as a mulch to retain water and the deep soil remains moist long enough for the corn to mature.

Seeds are planted in hills about 9 feet apart. The old corn stalks are left in place so that next year's corn can be grown in an off-set pattern, ensuring a fallow period between crops to accumulate moisture. Yield is typically about 600 pounds per acre under dry land conditions.

Researchers at Mesa Verde National Park grew native corn in a test plot for 17 years. In that time they had only two crop failures and several years with excellent crops.

This type of corn cropping system could be of value for subsistence

farmers in many areas of the world. This corn germplasm should also prove useful for researchers developing improved corn varieties for the dry lands

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Further reading

- Anschutz, K.E. 1976. The Hopi and Their Maize: Ethnobotanical Perspective, University of Michigan, Honors Thesis.
- Bradfield, M. 1971. The Changing Pattern of Hopi Agriculture. Royal Anthropological Institute, Occ. Paper # 30, London.
- Frank, P. and Watson, D. 1936. An Experimental Corn Field at Mesa Verde Park. Univ. of New Mexico, Bulletin.

NATIVE SEEDS/SEARCH
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Seed Source

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Hopi farmer Richard Pentaywa



Corn stubble left in field to allow for alternate spacing and soil moisture recharge



Historic Hopi waffle garden