

Shall We Domesticate Our Native Gourds?

By W. P. Bemis and J. S. Folkner

There are three species of wild gourds native to the desert regions of southwestern United States and northwestern Mexico. Two of these species, *Cucurbita digitata* and *C. palmata* are found growing wild in Arizona. The third species *C. cylindrata* is found mainly in Baja California, Mexico. These three species differ primarily in leaf pattern but are quite similar in other respects and hybridize readily with one another.

One of the unique features of these desert gourds is their attractive and delicate-appearing leaves. They are, however, true desert plants and can withstand high temperatures and prolonged periods of drought. The vine growth, which may reach 20 feet or more during a good growing season,

normally trails over the ground but will act as a climbing vine when trained.

The drawing at the top of this page shows the leaf patterns of the three species and the F₁ hybrids between the species. The leaves of *palmata* and *cylindrata* have a velvet like texture while those of *digitata* are coarse. The leaves are green with a silver mottled area around the leaf veins. The leaves remain green until killed by frost in the late fall.

Flowers are Short-Lived

Individual flowers are borne singly on the vines and remain in full bloom for a relatively short period from dawn until nine or ten a.m., when they shrivel and usually drop from the flower stem by nightfall. However, a single vine will continue to produce flowers throughout most of the growing season.

The flower petal color is orange and

the flowers are about three inches in diameter.

The fruit or gourds are spherical, about two and one-half to three inches in diameter, with stems from three to six inches long. They are mottle green with longitudinal stripes. The gourds on *palmata* and *digitata* turn yellow when mature while those of *cylindrata* remain green. Once mature, the gourds will remain hard for many months.

These gourds may have upwards of 600 seeds in each gourd. *Cylindrata* is characteristic in having the smallest seed, about 950 seeds per ounce, while *palmata* has about 575 seeds per ounce and *digitata* about 475 seeds per ounce.

Roots Source of Strength

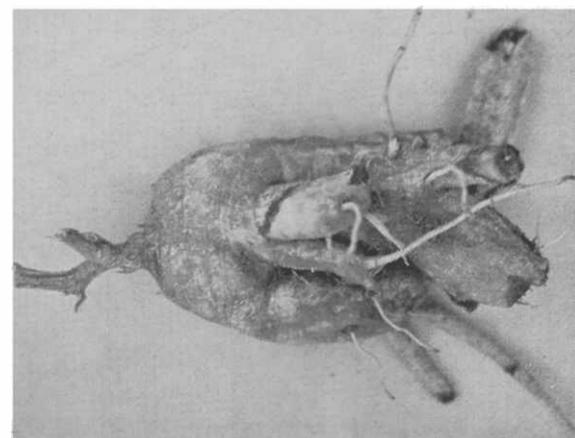
One factor contributing to the ability of these plants to survive under desert conditions is their root system. The roots are tuberous and often reach weights in excess of five pounds during a single growing season. These tuberous roots have two desirable characteristics. First they are able to survive the winter freezes and are able to produce new vine growth every summer, making these plants perennial.

Secondly, under periods of extreme drought the roots become impermeable to moisture loss and remain in a dormant condition until moisture is once more available. The vine growth may die back under these extreme droughts, but will initiate new growth when moisture is available.

These species of native gourds may be started from seed or by transplanting the tuberous roots. Seed germination is often low and requires temperatures around 90°F for maximum germination. Under natural growing conditions these species tend to form

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LARGE TUBEROUS ROOT of the desert gourd, viewed from the side. This tremendous storage capacity helps the plant survive in a harsh desert environment.



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VINES OF HYBRID wild gourd cascade up and over the patio wall in an ideal Tucson setting, contributing both beauty and native hardiness to the garden.

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colonies of plants by adventitious rooting at the nodes of the vines during periods of high soil moisture. A single colony may after a few years consist of several hundred individual plants, each having its own tuberous storage root.

Have Landscaping Use

The native gourds have been observed in various gardens of fanciers of native plants. They are not widely known by the public or even landscape specialists, limiting their use.

The landscape use of these vines is varied. In a desert garden, particularly a hillside or bank that requires a ground cover, these are excellent, inasmuch as they require no irrigation, which is difficult on a slope.

Trained over a fence or wall or in a tree the attractive foliage as well as the gourd itself is displayed. The fruit may be used as are all other gourds in decorative table arrangement.

These native gourds have the ability to grow under adverse conditions, and to survive as a dormant tuberous root

under prolonged periods of drought, but also they will thrive under cultivation and irrigation. The wide range of conditions for growth merits consideration of the native gourds as landscape subjects.

17 Today, New Topcoat Birthday Gift for P.A.

We hope you admire our new cover design.

With this issue, *Progressive Agriculture in Arizona* celebrates its 17th birthday. Like any teen-ager, it likes to be dressed well, so we went to a top designer to get the new winter "topcoat."

Designer of this new cover is Douglas Peck, award-winning artist in The University of Arizona Press. We think he did an excellent job.

Our only concern now is that the quality of content of the magazine will live up to its bright new cover.



Cochise County

KAWT, Douglas—6:15 a.m. Mon. through Fri.

KHIL, Willcox — Mon. thru Fri., 6 a.m.

Coconino County

KCLS, Flagstaff—Tues. and Thurs., 8:20 a.m.

KCLS, Flagstaff (Home Agent) — Wed., 9:45 a.m.

KPGE, Page — Fri., 2:30 p.m.

Gila County

KIKO, Globe-Miami
Monday, 12:45 p.m.

Graham County

KATO, Safford — Sat., 9:30 a.m.
Mon. thru Fri., 12:45 p.m. (daily)

Maricopa County

KTAR, Phoenix — Mon. thru Fri., 5:55 a.m.

KOY, Phoenix — Tues. thru Sat., 5:40 a.m.

KOY, Phoenix — Sunday Garden Club of The Air, 8:35 a.m.

KPHO, Phoenix — Mon., Cotton Report, 12:40 p.m.

KPHO, Phoenix — Thurs., Dairy and Livestock Report, 12:40 p.m.

KUPD, Phoenix — Mon. thru Fri., 5:30 a.m. and 12:30 p.m.

Mohave County

KAAA, Kingman—Mon., 1:15 p.m.
(Extension Home Economist)

Navajo County

KDJI, Holbrook — Tues., 12:45 to 1 p.m.

KINO, Winslow — Sat., 9:45-10:00 a.m.

Pinal County

KPIN, Casa Grande — Mon. thru Sat., 6:55 a.m.; Mon. and Fri., 9:30 a.m.; Tues., Thurs. and Sat., 12:20 p.m.

Yavapai County

KYCA, Prescott — Mon., Wed., Thurs. and Fri., 4:15 p.m.

KNOT, Prescott — Mon., Wed and Fri., 6:25 a.m.

Yuma County

KVOY, Yuma — Mon. thru Fri., 5:45 a.m.

KYUM, Yuma — Mon. thru Fri., 6:25 a.m.
10:05 a.m., Sat.