

Green Giant Agave

Maguey de pulque

A. Salmiana; *A. cochlearis*; *A. lehmanni*; *A. mitriformis*; *A. atrovirens* var. *sigmatophylla*

Family: Acanthaceae /Agavaceae

Basic Description: A very large plant with huge leaves. Can grow up to 4 - 6 feet high by 6 – 12 feet wide. It produces some off-sets. Leaves are dark green to glaucous gray-green, thick, hard, and smooth to slightly rough. The fleshy leaves have a thick leaf base. Teeth are chestnut brown aging to gray. Many varieties are attributed to this species.

Only in the back south portion of the Gardens, behind A. Americana by Texas ebony hedge.



Will add addition photos as species improves

Bloom & Fruit Description: Inflorescence rises 23-26 feet with 15-20 branches. The flowers are yellow tinged with red in bud. It will bloom once at the end of its life. Exact bloom trigger is not currently known. It has not yet bloomed in the Center Gardens.

Cultural information/Uses/Human Interaction: Principal species used in the production of pulque, a fermented drink, in Mexico. This species provides more than three fourths of the pulque production in the region. A graceful, though large ornamental.

Pulque predates the mescal and tequila production as the first known beverage use of agave. It was used during the Pre-Hispanic and Colonial periods. Traditionally it was controlled and used more for ceremonial, less for social purposes. Over time it has become a more social drink with significant taboos associated with who can drink it and when it can be used. The Ceremonial aspects have moved into social usage.

Pulque Process:

1. Agave stalk is cut short before it fully emerges, but the agave is left in the ground.
2. A 12-18 diameter circle is cut at the top of the heart (very center of the agave.)
3. Left to scar over for 4-6 months.
4. Scar is punctured several times and the fibrous pulp is scooped out, leaving a cavity called a cajete. The sap of the agave heart (agua miel), similar to maple syrup texture, runs into the cavity.
5. Juice is collected as it fills the cavity. Approximately 5-6 liters per day is collected. Fermentation cannot be allowed to begin in the field, and agave has naturally occurring yeast, so collection must be done frequently, approximately twice a day.
6. The agave can survive 4-6 months, but will finally die once the juices are collected.
7. Between visits the agave cavity is protected by pinning the leaves over the opening with the terminal spine at the end of the leaves.
8. The juice is stored in fermenting vats (tinas). Traditional tinas were made from cow hide stretched between wooden frames. Today they are oak or plastic.
9. Some completed and mature pulque is added to the vat to jump start the fermentation.
10. Fermentation can take 7-14 days depending on each family's personal philosophy and tasting of

the vats. Many factors affect the process, including ambient temperature, humidity level and time of year.

11. Timing to market is critical to avoid over fermentation.

Distribution/Range/Habitat: Wild and cultivated forms exist from Mexico states of San Luis Potosi, Hidalgo, and Puebla, west through Guanajuato and Michoacán, south through Mexico and Queretaro.

Cultural Requirements: There are so many forms, a variety can be found for every garden. Has wide temperature ranges with different varieties. Some survive to -4°F. Most do best in Mediterranean climates. In hottest parts of the desert weekly watering in the summer is desired, as well as part shade. Other cooler areas can tolerate full sun.

Propagation: Can be grown by seed or removal of off-sets.

Wildlife/Plant relationships: Most likely pollinated by bats, nectar birds and insects.

Disease/Pathology/toxins: agave snout weevil
Liquid in leaf is acidic and can cause skin irritation

Status: X

Resources:

Agaves, Yucca and Related Plants, Mary & Gary Irish
San Marcos Growers
Gathering the Desert, Gary Paul Nabhan

On-site Notes: Struggled in 2011, but seems to be improving in 2012.



Pulque being harvested from A. Salmiana



Fermented pulque

Photo Sources:

<http://www.bing.com/images/search?q=pulque+images&view=detail&id=D066A8DF274E41F4FE024718146271F81C03AD87&first=31&FORM=IDFRIR>

<http://www.bing.com/images/search?q=pulque+images&view=detail&id=842557ED184421FEC959BFCB22DA9035AB43DFC3&first=61&FORM=IDFRIR>