

MESQUITE :

Best Harvest, Storage, and Processing Practices

CHOOSE NATIVE SPECIES

Native mesquite (and other bean trees like palo verde and ironwood) evolved in the Sonoran Desert climate and are therefore highly drought and heat-tolerant. Mesquite trees grow some of the deepest tap roots to reach sub-surface ground-water.



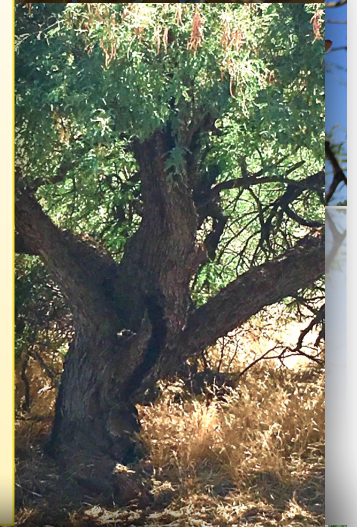
Sonoran mesquites with edible pods:

Velvet (*Prosopis velutina*)

Screwbean (*Prosopis pubescens*), and

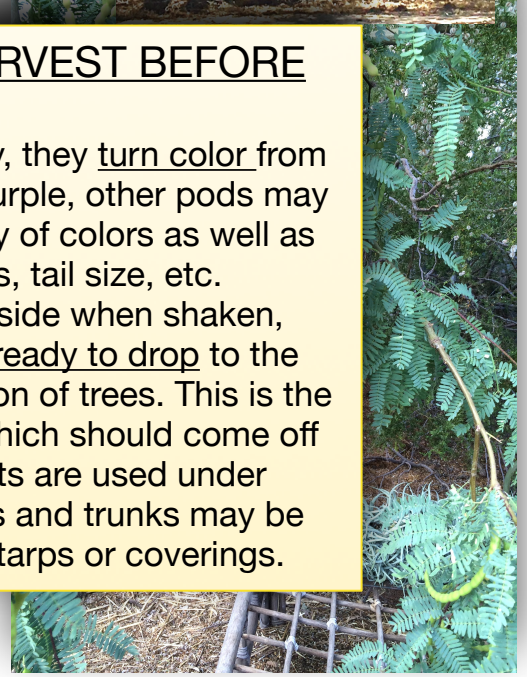
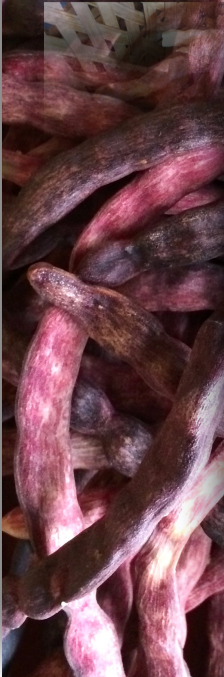
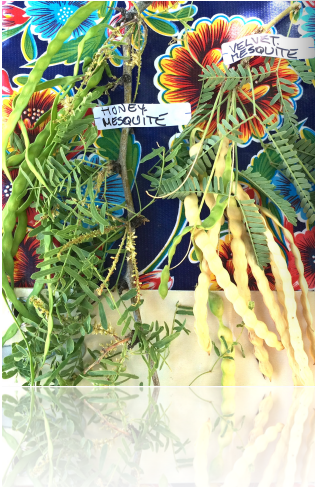
Honey (*Prosopis glandulosa*).

Non-native mesquites often have less-desirable pod flavors and other disadvantages, such as shallow root systems that result in tree blow-overs in windy-wet monsoon seasons, or ruptured sidewalks. Compare tree form, leaves, bark, thorns, flowers, pods, and seed features to identify beneficial native bean trees.



CHOOSE RIPE, DRY PODS and HARVEST BEFORE or BETWEEN RAINS

When pods ripen in late May-June-early July, they turn color from green to tan/golden, some with streaks of purple, other pods may be mostly pink to dark purple pods- a variety of colors as well as pod shape, thickness, beading around seeds, tail size, etc. Pods dry out as they ripen so seeds rattle inside when shaken, and ripe pods snap when broken. Pods are ready to drop to the ground when ripe, to seed the next generation of trees. This is the best time to harvest clusters of ripe pods, which should come off easily into harvesting hands. If tarps or sheets are used under trees to keep pods off ground, tree branches and trunks may be shaken to release ripe pods onto protective tarps or coverings.





CHOOSE GREAT FLAVORS

Ripe mesquite pods have a variety of flavors, most desirable, some not. Make sure to taste-test ripe mesquite pods for desirable flavor characteristics like sweet, nutty, caramel, maple, apple, tamarindo, chocolate, graham cracker, etc, before harvesting off trees. Great-tasting pods make great-tasting flour. Flavors and tastes to avoid include chalky, astringent, burning, bitter, etc.

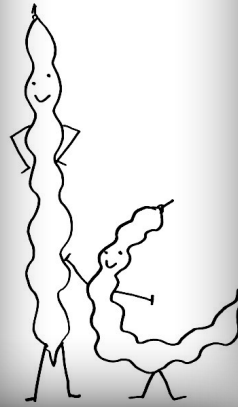
HARVEST OFF TREES, NOT THE GROUND

Mesquite pods start to ripen in the low desert starting in late May, through June and into early July. Pods on trees at higher elevations may ripen later in the season. Not all trees ripen at the same time. One test for ripeness is how easily pods detach from trees. A fully ripe cluster of pods detaches easily when grabbed or barely needs a pull to come off. This is the best time and method for harvesting pods.



It's also best to harvest mesquite pods off trees vs the ground since contact with the ground may expose pods to moisture, contaminants like herbicides or pet wastes, and soil organisms which may cause molds and aflatoxins on pods, a dangerous food safety and health concern. To avoid these problems, safely harvest pods off trees only.

Seeds inside mesquite pods are the method by which trees reproduce themselves, so pods ripen and detach from trees in windy, pre-summer monsoon season, perfect timing for pods to drop and get eaten, decompose, or get tumbled and scarified in downpour-filled washes, eventually germinating in soils moistened by desert rains. It pays to be a weather-watcher to properly time mesquite harvests well, to intercept the wind and avoid the rain.



Tests for Mesquite Pod Ripeness

Pods have changed color from green to tan, golden, red or purple-streaked

Pods are thoroughly dry and snap easily when broken

Seeds rattle inside pod when shaken

Birds may strip and eat sweet pod mesocarp pulp

It's late May-June-early July in the low desert

Pods taste sweet and flavorful

Pods have started falling/are blown off trees by wind

It's Aug-Sept in high desert, or 2nd season (Oct-Nov) in low desert



BRUCHID BEETLES (those little holes in pods!)

Bruchid beetles lay their eggs in the soft seeds inside young pods of green mesquites and palo verdes. Let them exit and your pods will be fine.

Use/make storage containers vented to allow beetle exit, or: **Double-freeze or toast** harvested pods to halt cycle.

Mesquite pods and flour are hygroscopic: they absorb humidity from the air. Store in dry, air-tight jars, double-bagged in freezer, in dry areas.

Moisture absorption can affect weight/volume measurements of flour or pods, or cause flour to clump.

BEST PRE-MILLING PROCESSING PRACTICES

Keep pods dry and safe from pests like rodents by storing in food-grade containers; completely dry mostly-ripe pods in the sun, solar oven, or low oven as needed; don't wash pods; sort by hand to remove debris like stem pieces, leaves, bark pieces, pods with visible problems, etc, from highest quality pods (see *Baja AZ Sustainable Agriculture*, www.basamesquite.org for sorting screens) Remove any green pods or pods that aren't fully dry enough to break easily when snapped. If you freeze pods between harvest and milling, they may absorb moisture from freezing, so pods should be re-dried in sun or toasted to drive out moisture before milling day. If pods are laid out to dry in the sun during summer, remember to bring pods in before dark so nighttime humidity does not build up overnight and soften them. Soft or unripe pods clog and slow the hammermill's operation.



MORE MESQUITE RESOURCES

Find more on Food Safety Standards, Testing for Aflatoxin, Food Safety Standards, Hi-Lo Risk and other resources [HERE](https://desertharvesters.org/dh-resources)

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