

Best Mesquite Pod-Harvesting Practices: AFATOXINS AND HOW TO AVOID THEM

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Aflatoxins, produced by an often-invisible fungus (*Aspergillus flavus*) are carcinogenic toxins common in many conventionally grown crops like peanuts and corn. Only small quantities of aflatoxins are considered safe, so follow these easy steps to help prevent this contamination in locally harvested mesquite pods.

1. HARVEST MESQUITE PODS **BEFORE THE RAINS**

Aflatoxins are most likely to form when a ripe crop—sweet, dry mesquite pods in this case—is exposed to both **high heat** and **moisture**; these are the very conditions low-desert monsoon season!

However, mesquite pods at *higher* elevations (above 3,500 ft.) can be safely harvested during the monsoon and into the fall. Cooler nighttime temperatures at higher elevations slow the growth of aflatoxin-producing fungi and lower aflatoxin-contamination risk. Therefore, in higher elevations, it has proven safe to harvest the pods as soon as you can after they ripen if you dry them promptly and store them dry.

2. PULL MESQUITE PODS FROM TREES. **DO NOT COLLECT PODS FROM THE GROUND.**

Moisture collects on and below the surface of the soil and exposes the pods to more fungi and bacteria (as well as animal waste, herbicides, etc.). To keep your pods free of a variety of things you don't want to eat, use your hands or harvest hoe to pull pods from the branches.

3. DRY PODS RAPIDLY AND COMPLETELY, THEN **KEEP PODS DRY.**

Do not wash your mesquite pods with water! The moisture absorbed from that wash water could support the growth of pesky microbes. To dry pods post-harvest, lay them on tables and tarps to dry outside, in a solar oven, or in a car parked in the Arizona sun. Wherever they dry, make sure they are protected from animals and from moisture. (Do not leave pods out overnight as nighttime moisture could condense on them.) Make sure your pods pass the snap test (easily snapping in two when you try to bend them) before storing them.

4. **MILL MESQUITE PODS SOON** AFTER HARVEST

Mesquite pods and flour are hygroscopic—they absorb moisture from humid air. Thus, Desert Harvesters now offers millings during the dry conditions of early summer to turn your harvest into flour before the rains. Pre-monsoon milling also prevents the mill from getting gummed up by pods moistened by humid weather. Once milled, dry mesquite flour is shelf-stable and can be safely stored in a sealed container.

* If you plan to sell your flour commercially or if you belong to a particularly susceptible group (those with HIV, hepatitis, cirrhosis, or other liver issues), see the "Aflatoxin & How to Avoid It" page at DesertHarvesters.org for more info and options for testing your flour for aflatoxins. Destroy any food with aflatoxin levels at or higher than 20 ppb (a concentration equal to 20 drops of water in an Olympic-sized swimming pool); it cannot be sold legally in the US.