Curing Olives for Eating

by Powell Gammill

This article was completely inspired and very loosely based upon a talk that Ivan Monoogian recently gave on curing and eating olives at the monthly Arizona Rare Fruit Grower's meeting.

I never realized how easy -- but water consuming -- it was to "cure" olives. That is, make them fit to eat: They are extremely bitter off of the tree---yuck, I knew that! [An exception is a small olive called Throubes (an olive from the islands of Thassos or of Chalkidiki with bigger fruit, that’s picked when fully mature), whose bitterness is removed by a microorganism present on the olive when the olive is fully ripe. When ripe they can be eaten directly off of the tree, and are shipped shriveled (crinkly) preserved in salt or in olive oil.]

Also, green olives are simply unripe black olives. [And those canned black olives are usually stained with iron-yum or air is bubbled through the lye curing solution to oxide green olives black = California black olives in cans...seriously?!] So you can get a twofer in taste sensations by harvesting olives at different stages. Green olives are harder than black olives, therefore some curing techniques work better on one or the other.

And the olives you buy in stores are usually cured using lye. The “traditional” non-lye methods (and lye has been used for thousands of years) result in a different tasting olive... a fourer ;-) Actually because there are several ways to cure olives each produces a slightly unique taste and using unripe green, in between (blonde) and ripe black olives gives the home preparer a lot of tastes and textures unavailable on the consumer market.

And I was privy to tasting several finishing (preserving) flavorings of green olives---and man was I hooked! Lemon flavored olives, or hot pepper or rosemary (I think?) flavored olives...either way, just plop some of whatever you can imagine in a jar with some olives (and you will have a lot of jars to experiment with) and you can have your own creations.

[Note: Olives are commercially grown primarily for their oil. While not discussing that in this article, usually where there are olives there are commercial small batch pressers if you are inclined to press your own. Also many olive tree varieties exist for oil not edibility---though they still make perfectly edible olives. The main ones you see in stores for food are Mission and Manzanillo varieties, with some Sevillano, Ascolano and Barouni. Other important edible varieties include the newly popular Kalamata, Hojiblanca, and Picholine olives. I include this in case you want to plant your own olive trees/shrubs. While self-fertile, cross pollinating between varieties increases yield. Olive trees tend to alternate bear, meaning one year a good yield of fruit the next year not so good.]

If you are lucky enough to live where olives grow and fruit you may have many neighbors and municipalities that use olive trees as decorative evergreen trees or shrubs/hedges. Olive trees look good, are easy to grow and propagate and use little additional water or resources. [Or they can be banned by governments as an invasive and allergenic species as birds spread seeds and the resulting wild-type olive trees are not useful except as rootstock.]
The fruit (olives) being bitter, many proud olive tree owners consider the fruit an annoying unharvestable staining problem. They may spray them with a substance that prevents fruiting (and the olive tree's beautiful flowering). But they may just as likely be thrilled with someone wanting to harvest them and not want anything in return. At worst maybe a deal for a share of the bounty once you are done curing them. Harvest only off of the tree not olives (bruised) found on the ground.

And olive trees are prodigious. They produce a lot of fruit from September to November. Fruit that can be harvested green or black or in between.

Lidded 5 gallon food grade plastic buckets and a tarp can be used to collect the olives. Others use large plastic bags. Food grade buckets can be purchased, but plenty of restaurants toss them daily with their lids into the trash. Some people add water to the bucket so the olives are less likely to bruise.

Once you get the haul back to your place you can use the tarp to pick out any leaves or stems remaining. Also sort green olives from ripening olives (blonde) and process them separately. Toss any shrunken (dehydrated) olives as they won't cure properly. Someone suggested putting the biggest olives at the top of the bucket so when test sampling for curing progress you can see if the cure has penetrated all the way to the pit on the largest ones. Others sort large from small olives and process in separate batches to improve uniformity of cure.

Then choose your method of curing. They are all good and have good news / bad news.

Lye—a caustic not poisonous agent--freaks people out. It burns if swallowed or directly contacting skin and heats up on contacting water. But food grade lye (sodium hydroxide) is easily soaked out of the olives. And it can be used without breaking the skin of the olive. [The drug war has restricted lye purchases in many states. Be prepared to produce ID and have a record of your purchase made after telling whomever it is for olive curing...nice, eh?] It is not poisonous by itself but it is extremely alkaline in nature (pH=13) so if you ingest any in an olive not fully soaked clean of its lye it won't harm you (has a disagreeable soapy, slippery feel if alkaline conditions are still present).

All other methods (involving salt or brine) you must first break the skin and meat to assist the astringent (bitter) agent (called oleuropein and some phenols) present to leave and enter the surrounding water via osmosis (diffusion). Breaking the olive can be accomplished by a number of methods: (any way you readily can really) With olives in a plastic bag hit with any hard object (bat, 2 x 4, etc.), or poke holes with a fork or slit twice or more with a sharp knife to the pit if you prefer neat. Make sure to drop the punctured or sliced olives into water (maybe with a little lemon juice or cider vinegar added to lower the water's pH) immediately or the sliced area will oxidize and turn brown. This oxidation is harmless but you are shooting for a uniform color of the olive over time. I don't know if you can first "pit" (remove the pit, aka stone or seed) the uncured olive to break the skin but you can manually carry this out at some point (and stuff it in the end). With lye, the penetrating alkaline lye breaks the bonds of the bittering agent neutralizing it.

One of the great things about curing olives is it is forgiving. Not cured all the way? Re-add more curing agent with more time. For lye it is possible to over cure...the olive gets too soft.
Too salty? Wash one or more further times. *Et cetera.* Too much of a seasoning? In that you may have a problem with removing some of it, but you can try. This is why some seasonings are added just before the product is finished lest they overwhelm the olive flavor.

Any guests trying your olives will be blown away as I was with the taste and texture of homemade olives.

-------------------------------

The general outline of all the procedures are:

1. Essentially you gently gather unbruised clean olives off of the tree. Check for presence of a harmless but unappetizing maggot entry (olive fly) causes a small but obvious eighth of an inch circular crater scar in the olive if the fly is present in your area. Discard any olives with such a crater. Sort olives by color. Sort olives by size.

2. Pre-wash for some curing methods. Suggested not to pre-wash for the brining method.

3. Break, puncture or cut skin/meat of olive fruit to the pit. Not necessary for lye method.


5. Bottle, or preserve olives (with seasoning if desired). Can pit and stuff at this point too. Olives can keep for two weeks to over a year depending upon storage method chosen.

-----------------------------

I have linked to the best articles I could find (with recipes) on curing olives at the bottom of this article, and they are good ones. But moving past collecting and breaking the skin, general outlines of curing methods can be found below. They really aren't hard but can occur over a period of days to months and consume a lot of water. The shortest ones are more labor intensive. Fortunately the large amount of raw materials are not expensive. Salty waste is best poured down the drain. Alkaline waste (lye) is best poured down the drain or neutralized somewhat before pouring in the yard. I will say several authors expressed a preference for sea salt over Kosher in outcome flavor.

For example, one method (brining) uses a ratio of 1 gallon of room temperature water, plus one pound (16oz) of pickling, *sea* or *Kosher* salt (never use iodized salt) and 1 cup of white or red wine or wine or cider vinegar (provides the lactic acid producing bacteria / yeast and kick starts a fermentation environment). The solution is added to a bucket of olives, and they are weighted down with an inert object, such as a plate, so they are **fully** immersed to avoid oxidation and **lightly** sealed in their container. The gases of fermentation should be able to escape. After some weeks, the salinity drops from 10% to around 5 to 6%, once the water in the olives moves into solution and the salt moves into the olives. [Later in the curing process, if the fermentation reaction prematurely slows down you can add a small amount of sugar to kick start it back up.] The olives are edible within 2 weeks to a month, but can be left to cure for up to three months. Take some out and sample them. ([wiki](https://en.wikipedia.org/wiki/Brine_%28food%29))

**Curing:** lye (fast but removes some olive flavor), dry salt (desiccates), brine (lactic acid production) and water (leaves olive flavor mostly intact *if* not overdone) methods ... each will
impart different taste and texture to the olives.

Storage life varies with brining and preserving method and olive variety but can be extended with longer storage solutions (olive oil covered brine, refrigerator, freezing, drying, olive oil or canning)

1. **Water curing**: Good for large green olives. Water curing olives must first be cracked or cut as above. Place in a 5 gallon bucket. Place a dinner plate on top of the olives to prevent olives from floating. Fill bucket with water. Change two to three times a day for six to ten days. [This uses a lot of water. Consider dumping next to a tree instead of down a drain.] After about twelve washes taste test a sample olive until bitterness is gone or acceptable. Water curing usually has some degree of bitterness remaining but this is an often desirable characteristic of olives. I must warn you some people report up to 40 days required to remove bitterness with the water curing method (not enough or deep breaking of skin?!!!)...this can also wash out taste and make the olives too soft. Monitor carefully. [image: olive bucket plate here] Proceed to finishing olives by refrigeration or preservation in brine. Water curing takes about a month, and the resulting olives are good, but not fabulous.

2. **Brine curing**: ([primary ref]) Brine curing is easy but it takes many months soaking time like a wine.

   The salt is going into the olives and the oleuropein is diffusing out. Also your olives are fermenting; the fermentation is breaking down the oleuropein and produces lactic acid. That’s why you never wash olives before brining — you want those natural bacteria and yeasts on the outside of the olive to be present. The brine should darken, and you might get a scum on the top. That’s OK. Change the brine every month or two, when it begins to look extra nasty. Don’t re-rinse the olives, during changes, either, because you want the residue to act as a “starter” to get the next batch of brine going.

   Keep in mind you will be in for the long haul: Olives picked in October are typically ready to eat in May or June.

   Add seasonings (see below) after the New Year, otherwise you risk too much spice and not enough olive flavor; this is especially true of chiles. If you find you’ve gone too far, change the brine and don’t add new seasonings, and let it steep for a few weeks. That should calm things down a bit.

   Finishing: Drain a pound or so of the pickled olives, place in a clean jar and add one sliced garlic clove, 2 lemon wedges, a sprig of fresh dill and enough olive oil (1/2”) to cover the olives. These olives will be ready to eat after two weeks and will happily store for several months in a cool, dark place.

3. **Salt curing** (dry): (recommended for large black olives)

   [ref] Outdoors (reaching daytime highs of at least 85 degrees ideal), in a basket, burlap bag, or
wooden box lined with burlap (to allow drying air to freely circulate), layer olives with coarse sea salt (you’ll need about 1 pound of salt for every 2 pounds of olives). Leave the olives outside (with plastic underneath to catch the juices that drain) for 3-4 weeks, shaking daily and adding a little more salt every 2-3 days. Taste for bitterness (rinsing the olive first). When no longer bitter, you can either shake off excess salt and keep them that way, or shake off the excess salt and dip them quickly in boiling water to get rid of the salt. They can be marinated for a few days in olive oil to regain plumpness (this type of curing will shrivel olives), or just coat olives well with olive oil before eating.

4. **Lye curing**: [ref] Produces best textured, buttery smooth olive. Fast. Preferred method of home curers who have tried it—sorry but true. But with a large harvest of olives water, brining and lye methods produce different taste/textured olives that can all be cherished.

First thing you need to know about curing olives with lye is that you must use fresh green olives. Not black ones, not half-ripe ones. The lye process softens the meat of the olive, so you want it as hard as possible [ref] and that is the greens.

Lye will burn. Avoid getting any on your skin or in your eyes. I assume you can keep it out of your mouth. You will see instructions to wear old clothes, long sleeve/long pants, closed toed shoes, safety glasses and rubber gloves. The safety glasses and long rubber gloves is a good idea. Wash any skin or eye contacts with lye with cool running water for 15 minutes. Having lemon juice or vinegar around to help neutralize any spills or splashes too is a good idea. But preparing ahead is really all you need.

When you dissolve lye into cold/cool water it will heat the water up (an exothermic “heat producing” reaction). DON’T add water to lye (it could boil and expel lye outward). Add lye to water (don’t use an aluminum or galvanized container as lye dissolves aluminum or galvanized metal). And add lye in small amounts (10% of the full amount) at a time while mixing to not heat up too fast. Once mixed and cooled back down then you can carefully add the lye solution to olives avoiding spilling and splashes.

Set up and leave your olives to cure near a drain so you can readily dispose of the caustic agent when it is time to drain the lye curing agent.

As was said above use food grade lye or **100% pure** lye (no friggin additives). Lye is also called sodium hydroxide.

This curing is fast—up to 12 hours usually. With sample testing every couple of hours until lye has fully penetrated the olives.

After lye treatment, carefully and safely pour the caustic solution down the drain (it will clean out your pipes) and remove the lye from the olives with a series of long cold water rinses/soakings (which are not harmful, and can be dumped near trees in areas with overly acid soil) lasting days and then brine finishing/preservation is carried out. If bribing for long term usage (more than two weeks) progressively more concentrated brine solutions are used to avoid shrinking the now porous olives.
This brining a can be a nonfermenting or fermenting finishing process depending upon taste desired.

As was said above, if you should still have some lye remaining in your olives after these washes you won’t be harmed, but you sure won’t like the new flavor of your olives...continue washing.

5. **Oil curing**: (I have never seen this anywhere else but this adjacent link and it is not referenced. Since the bittering agent is water soluble I am dubious as to its effectiveness. And does it work on green and black olives?)

Cover in olive oil and leave them alone for several months. Test for taste. [Ought to be amendable to a small batch test trial.]

### Post curing---Finishing and Preservation.

At some point during or after curing you begin to finish (dress) the product (imparting its final flavor) or preserve your olives either in a refrigerator for the short haul or in a pickling agent for the long haul.

Finishing while still curing can be lowering the final salt concentration, adding spices and other flavorings, and adding lemon juice, wine or vinegar. This increases taste agreeability and preservation of the product. It gives you a final chance to make your mark upon the product. And it can be done on small batches using different combinations for different outcomes. [I also ponder if the recipe for sweet pickles would work on finishing olives....]

Ideas from various authors: Olives can be flavored by soaking them in various marinades, or removing the pit and stuffing them. Popular flavorings are herbs, spices, olive oil, feta cheese, blue cheese, capsicum (pimento), chili, lemon zest, lemon juice, garlic cloves, wine, vinegar, juniper berries, almonds, and anchovies....and of course the ultimate, jalapeno.

What herbs? Always bay leaves and coriander. Beyond that: Citrus rind, black pepper, chiles, oregano, rosemary, sage, garlic, Szechuan peppercorns, etc. Go easy though: Water-cured olives should taste like olives — slightly bitter, firm and rich. Choose just a few seasonings and leave it at that.

The traditional Spanish cure would add some vinegar to the mix, as well as bay leaf and other spices. Play with adding a touch of *smoked salt*, chiles, black pepper, coriander, mustard seed, or garlic — think Mediterranean flavors.

You can also make marinades for your cured olives, good flavors/herbs to use in various combinations are: garlic, bay leaf, oregano, thyme, dried chiles, fennel seed, peppercorns, coriander seed, orange peel, lemon peel, lemon slices, cumin seed.

There are many ways to finish (or dress) olives. Do them with lemon juice, thinly sliced lemons, crushed, roasted coriander seeds, garlic and olive oil. Steep them in lemon juice, harissa and garlic or with roasted fennel seeds, sliced oranges, garlic and fresh thyme or...
simply covered with olive oil, chopped fresh herbs lemon juice and chilli. The possibilities are endless. One thing to remember, although olives last well, the added fresh ingredients don’t, they need to be refrigerated. To prevent molding stored olives should be covered with a 1/2” film of olive oil. The olives are ready for immediate consumption, but improve within a day or so of marinating.

In closing, I only wish I could convey to you the WOW factor the first time you try someone’s home cured olives. I am a fan of green olives but frankly can only eat about four in one sitting. I could have eaten a lot more of these home cured green olives. Wow!

**Online References:**

- [Olives: Safe Methods for Home Pickling](#) by the University of California. 26 page classic.
- [How to Cure Green Olives](#) - by Hank Shaw
- [Curing Olives: Don’t be Afraid to Lye](#) - by Hank Shaw
- [Cure Your Own Olives](#) - by Nancy Gaifyllia
- [Curing Katamala Olives](#) - by Chris Smith and Basil Papahronis

[Informative photos of the process](#)

*Powell Gammill is a certified Permaculture Design Consultant whose interests lie in creating an environment in which food is grown to benefit families and draw neighbors together. Where dependency on outside resources is diminished. And properties are improved with use instead of being depleted.*