Eating Acorns

A Guide to Processing Acorns for Use as Food

Mary Hatch

Why eat acorns?

Oak trees, which belong to the Quercus genus, are native to most parts of the northern hemisphere. There are around 600 different species on the entire globe, each producing its own version of the acorn, a tree nut that provides nourishment to a wide variety of mammals and birds.

Acorns are known to have been a staple food of numerous human populations throughout history, playing a particularly important role in the diets of the Native Americans of California. For whatever reason, this still abundant food source has taken a big dip in popularity all over the world.

Today, Korea is the top consumer of acorn, mostly eating it in the form of *dotorimuk*, an acorn jelly and acorn noodles. Meanwhile, in most other parts of the world the better part of the population is clueless to the fact that acorns are even edible! Well, its time we get the word out because acorns, besides having a rich history, are full of essential nutrients, not to mention they're delicious, plentiful and FREE!

Nutritional Information

Caloric Break down:

42% Carbohydrate
52% Fats
6% Protein

Nutrients of significance:

Calcium
Phosphorus
Potassium
Niacin
Vitamin B6
Manganese
Copper
Folate

PART 1: Harvesting the Oak Nuts

Ideally, the collection process begins in the fall, when Oak trees have most recently dropped hundreds of acorns to the ground. But acorns found after this time can be used just as well, although flavor will be slightly compromised as the acorns age.

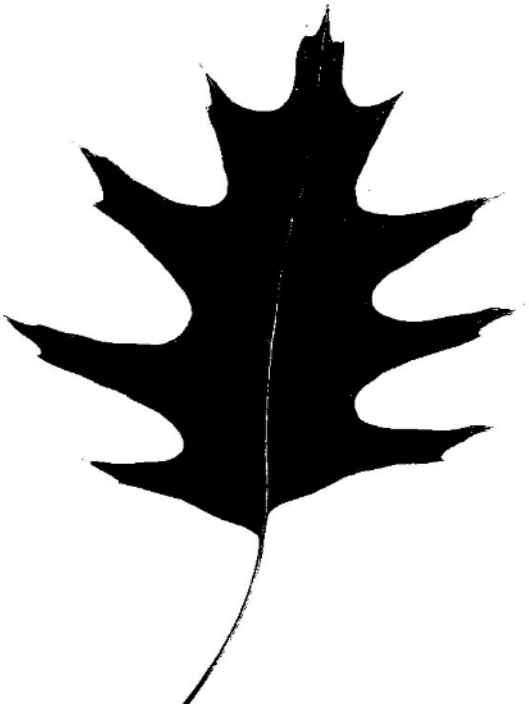
There are hundreds of species of Oak trees, and each has its own variation of acorn. In the Northeast, most Oak trees encountered will either be Red Oak or White Oak, and the difference between the two is noteworthy.

Acorns from White Oak trees are preferable due to a lower tannic acid content. Tannic acid is the substance that makes acorns taste bitter. Even the squirrels prove to favor the white ones and eat as many as they can while they are fresh off the tree. The acorns of the Red Oak have about five times as much tannic acid and require slightly more processing. Both however, are perfectly acceptable for use. (Squirrels bury the red oak nuts in the ground and over time, water running through the soil helps to leach out bitter tannins. Acorns that are forgotten sometimes sprout into trees!)

The collection process can be made faster using a rake. Otherwise it should not take too long to collect enough by hand.

Here is a simple way to differentiate:

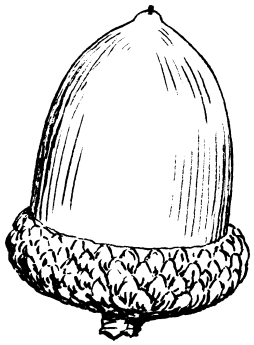
(It is also useful to note bark texture although this difference is subtler.)



Red Oak

The leaves of the Red Oak have pointed leaves like this. The red oak nuts have a squatter more curled-in top than the white ones.

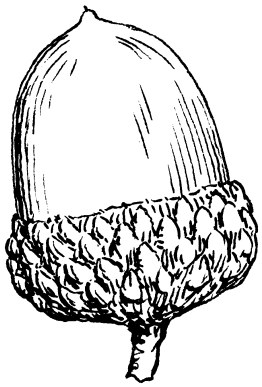
RED - POINTY - FIRE



White Oak

The leaves of the White Oak have lobed leaves like this. The White Oak nuts look something like this.

WHITE - LOBED – CLOUDS



PART 2: Storing Unprocessed Acorns

If the acorns are not going to be processed for a while, care should be taken to store them properly so that they don't rot or mold. Either keep them out in the cold until its time to process them or follow these simple instructions.

1. Dump the harvested acorns into a bucket of water.

2. Discard all the acorns that float. (These acorns have either rotted or have a grub living inside which has been laid by a particular moth. Many people eat this grub so go for it if you're feeling hungry: its rich in protein!)

3. If the sun is out, dry the acorns (in shell) by spreading them out under the sun for a few days. Alternatively the Acorns can be laid out on oven trays and roasted at around 250-300º F for up to 30 minutes.

4. The acorns are now ready for longer-term storage and should last at least a few months as long as they are kept in a dry place.

PART 3: Shelling Acorns

Separating the acorn meats from their shells is the most labor-intensive part of the process. Here are some ideas about how to do it.

If you have not followed the instructions for storing unprocessed acorns, you may want to place the acorns (still in shells) onto oven trays and roast them at 250-300º F for up to 30 minutes. This will make the shells more brittle so that they can be more easily removed.

1. Cracking an acorn is easiest if the point is facing upwards. Line a few handfuls up on their tops, perhaps in a pan so they can't get away and quickly pound them each one by one. Do this using the heaviest rock you can hold comfortably in one hand, preferably with a flat bottom so the acorn doesn't just slip away. Shell them after a bunch have been cracked.
2. Try not to pound too hard because you don't want to crack the nutmeats into too many pieces.
3. To make more refined, sweeter tasting acorn flour, the papery covering in between shell and nutmeat must be removed. Whether or not you choose to do this probably depends on how much time you want to devote to your flour.
4. A nutcracker can be used to crack acorns one by one but this is time consuming.
5. THE MORE PEOPLE ON TASK, THE BETTER!

PART 4: Leaching Out the Tannins

Leaching is necessary in order to remove the bitter tannins from the acorns. The fastest way to do this is using the hot water method, which I will describe. A more traditional method entails placing the shelled nutmeats into a cloth sack (cheese cloth or even a single layer of thinner cotton like an old t-shirt will due) this bundle is then secured in a running stream and left there for a week or two depending on the bitterness of the acorns, the aggression of the stream, and the temperature of the water.

1. Place the shelled nutmeats into a pot of already boiling water. Allow the pot to boil for about ten minutes or until the water is a deep brown (from the tannins).
2. Then remove them from that pot and place them into another pot of <u>already</u> boiling water. Continue this process until the nutmeats no longer taste bitter.
3. The number of water changes will vary depending on the bitterness of the acorns. It generally takes between 3 and 6 changes of water. Once the acorns taste pleasant, remove them from the water for good.

The dark brown water left over is now heavily infused with tannins. Don't drink it! It has many uses and should not be discarded! Instead store it in closed jars in the refrigerator. If mold forms on the top, skim it off and re-boil the solution in order to kill the mold. TURN TO PAGE 10 FOR TANNIC ACID USES!!!

Part 5: Dehydrating the Nutmeats

At this point the wet nutmeats can be placed in a blender or food processor and ground until as smooth as possible. This mush should only be made if you want to use the acorn within a week. It can then be used in place of most flour in your favorite recipes or to thicken soups, or however you'd like.

It's also great to use the leached acorns as whole pieces in soups and stir fries, or whatever you can think of.

Most people find a dried flour to be preferable to a wet mush. Here's the next step toward making a flour that can keep as long as wheat flour if made and stored correctly:

- Place the drained nutmeats in a single layer on cookie sheets and bake at the lowest temperature setting until completely dry without burning. **OR**

- Use a dehydrator to release the moisture. **OR**

- Spread the drained nutmeats in a single layer on trays and leave them out in the sun to dry. Be careful where you leave them because the squirrels and others will be tempted to feast.

Dehydrated nutmeats can be stored longer term in tupperware or glass jars, or it can be ground up into flour.

Part 6: Grinding Acorns into Flour

The dehydrated nutmeats can now be ground up into flour or course meal that can be used in more ways that you can think of. Here are some options for grinding.

- Mortar and pestle – great for smaller amounts, but requires strength, time, and patience.
- Hand-cranked grain mill – this is a good option if you have one but the results will likely leave some larger pieces, which can be sifted out and reground.
- Electric coffee mill – probably also best for smaller amounts but makes one of the finest flours.
- Blender or food processor – perhaps the most efficient method for larger quantities and could yield a pretty fine flour.
- Rock slabs – your going to have to do some research if you prefer a more primitive method of grinding.

If you can manage it, finer flour will be better for most types of baking although courser meal has great texture. Usually the product is more similar in texture to fine cornmeal than wheat flour. Sifting will ensure a more consistent batch.

If you plan to store your acorn flour for a while, it is best to keep it in closed glass jars in a cool dry place. It should last all year and longer.

USES FOR TANNIC ACID SOLUTION Don't throw it away!!!

Natural Dye for Clothing: yields a beautiful brown color, but requires a fixative. Vinegar fixative has been known to work effectively.

Laundry Detergent: use about two cups per load. Clothing will smell great, but whites will turn a tan color. Antiseptic properties will act in place of chemical cleaning agents.

Antiviral and Antiseptic: use as a skin wash for rashes, skin irritations, burns, poison ivy, cuts, etc. The solution will mitigate bleeding and help heal wounds while stopping infection. It is also an astringent, causing the skin to tighten or contract.

Anti-inflammatory: taken internally, solution helps to sooth sore throats, diarrhea, dysentery, gastritis and irritable bowel syndrome. Can also be applied externally to hemorrhoids. (WARNING: consult professionals before taking internally)

Tanning Animal Skins: by soaking animal skins in the solution, the hide can be tanned more easily. This is why the water is called tannic acid!

ACORN FLOUR RECIPES

Here are some simple recipes that highlight the acorns. You can try these, or try replacing the wheat or corn flour called for in any other recipe with the acorn flour. Go crazy!

Acorn Bread

- 1 cups acorn flour
- 1 cups cattail or white flour
- 3 teaspoons baking powder
- 1/3 cup maple syrup or sugar
- 1 egg
- 1/2 cup milk
- 3 tablespoons olive oil or melted butter

Combine all ingredients and bake in pan for 30 minutes or until done at 400 degrees (test by inserting a toothpick into the center. If it comes out clean, the bread should be done)

Acorn Stew

- 1 lb stewing meat (beef, venison, anything)
- 1/2 cup finely ground acorn meal
- Salt and pepper to taste

Place meat in heavy pan and add water to cover. Cover with lid and simmer until very tender. Remove from liquid and cut meat into very fine pieces. Return meat to the liquid. Stir in the acorn meal. Add salt and pepper as desired. Heat until thickened and serve.

Acorn Griddle Cakes

- 2/3 cup acorn flour
- 1/3 cup cattail or wheat flour
- 1 tsp. baking powder
- 1/3 tsp. salt
- 1 Tablespoon honey
- 1 egg, beaten
- 3/4 cup milk
- 3 Tablespoons melted butter

Combine dry ingredients. Mix together egg and milk, and then beat into dry ingredients, forming a smooth batter. Add butter. Drop batter onto hot, greased griddle. Bake, turning each cake when it is browned on underside and puffed and slightly set on top. Makes 12 to 15.

Acorn Cookies

- 1 1/2 cups acorn flour
- ½ cup wheat or cattail flour
- 1/2 teaspoon salt
- Optional pinch cinnamon or other spice to taste
- 1/2 cup plus 2 tablespoons powdered sugar
- 1 cup unsalted butter, room temperature, in chunks
- 1 teaspoon water

Combine dry ingredients first. Then add the rest and combine thoroughly using food processor or hands. Shape into 2 ½ inch diameter log and refrigerate for about 30 minutes. Slice cookies into 1/3 inch discs and bake in

preheated oven at 375º F for 12 to 15 minutes, then transfer to a cooling rack.

Acorn Spinach Burgers

- 1 box frozen spinach (can be replaced with large bunch wilted drained and chopped fresh spinach or stinging nettles or other greens)
- 1 ½ cups acorn flour
- ½ cup wheat or cattail flour
- 2 eggs
- Salt and pepper
- Olive or vegetable oil for frying

Combine all ingredients thoroughly. Shape into patties and fry in heated oil until browned on both sides. Best served on bread or rolls with condiments.

Works Referenced

http://en.wikipedia.org/wiki/Tannin#Uses (Informative about uses of tannic acid)

http://www.jackmtn.com/acornbread.html (Recipe for acorn bread, tannic acid uses, general flour making, great reference)

http://www.nutritiondata.com/facts/nut-and-seed-products/3083/2 (Nutritional composition of dried acorns)

http://www.prodigalgardens.info/processing%20acorns%20step%20by%20step.htm (Great recipe for processing acorns into flour)

http://webcache.googleusercontent.com/search?q=cache%3AgkLy3EgE7vQJ%3Aonceuponawatershed.org%2Fpdfs%2FAcorn_Recipe_English.pdf+acorn+cookies+recipe&hl=en&gl=us (Acorn cookie recipe)

http://siouxme.com/acorn.html (Recipes for acorn stew and acorn griddle cakes)

Logan, William Bryant. *Oak: the Frame of Civilization*. New York: W.W. Norton &, 2005. Print. (Excellent source on oak trees and history of acorn eating)

Ortiz, Bev. *It Will Live Forever: Traditional Yosemite Indian Acorn Preparation*. Berkeley, Calif.: Heyday in Association with Rick Heide, 1996. Print. (Most in depth insight into traditional acorn preparation)

This book has been created in an effort to spread the information necessary to process acorns for food.

Acorns are delicious!

If possible please print and distribute copies of this zine.