

# MU Guide

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## Home production of black walnut nutmeats

James Pastoret, The School of Natural Resources

The Eastern Walnut tree grows prolifically in Missouri. In the fall of the year, as most Missourians know, the ground is covered with large green walnuts under the crown of most black walnut trees. The nuts are there for the taking; in fact, most people would be grateful to have them removed from their lawns. Very few people will want to spend time collecting the nuts, removing the husk (fleshy cover) and allowing the nuts to dry out a month or two before cracking and removing the nut meats.

Black walnuts are hard to crack compared to most other hard-shelled seeds. After cracking, the nutmeats are difficult to remove, and the return of nutmeat per pound of uncracked nuts is low. At this writing (June, 1990) black walnut meats are selling for more than \$6 per pound in most shops. To encourage the harvest of black walnut nutmeats, a systematic approach to processing the nuts needs to be developed. Potential producers need an inexpensive in-house system to maximize the production of black walnut meats with a minimum of effort.

Probably most of the people interested in nutmeat production would be made up of senior citizens or young families using the activity as a hobby or "nature" experience.

This guide discusses home production of walnut meats under the headings of harvesting and collecting; hulling and cleaning; drying; cracking; separating; storing; selling; and miscellaneous information.

### Harvesting or collecting

The best collection time ranges from the last week in September through October. The scheme one uses to collect nuts can vary greatly. If collecting in your neighborhood, a wheelbarrow and a couple of buckets will probably suffice.

One author suggested that the nuts are "ripe" when the hull can be indented with the thumb or when the hull has taken on a degree of softness. One correspondent, Keith Bernard of New London, Mo., suggests a device for those that don't want to bend over when collecting walnuts. He writes: "Take a 36" x 2" x 1" stick and fasten a medium-sized bean can to it. Put a hole in the bottom of the can and use a 1/4" bolt



Figure 1. One home method of hulling is a simple plywood device that makes removing husks easier.

to hold it in place. It gives a chance to cover a lot of ground, and I don't bend over. I put mine in a 5-gallon bucket."

### Hulling and cleaning

A pile of walnuts is generally safe from pilferage except from squirrels. If you don't want to share your cache with the squirrels, cover the nuts to protect them.

Some authors caution that walnuts should be hulled and cleaned while the husk is still green. In time, the husk will soften to a mealy consistency and turn black. At this point the hull can easily be rubbed off, but they are messy and will severely stain your hands brown if you don't wear rubber gloves.

At collection points throughout the state, organizations such as Missouri Farmers Association operate walnut hulling machines in season. It costs a few dollars to have your walnuts hulled, usually in units of 100 pounds. Corn shelling machines are also an effective device for removing the husks from walnuts.

Another small production method of removing husks is to cut a piece of 3/4" plywood to approximately 6" x 20". Drill one or two 1 5/8" diameter holes in the center of the piece of plywood and place the plywood



**Figure 2. Cracking large quantities of black walnuts in a burlap bag or heavy plastic sack with a wooden mallet speeds up the cracking process.**

on the top of a metal pail. Place walnuts on each hole. (Figure 1) Hit the walnuts with a wooden mallet, shearing off the husk.

The system sounds rather crude, but it proves to be effective on a small scale. The production rate is reasonably fast once a "rhythm of work" is established.

Many methods have been used to remove black walnut husks. If you have only a few nuts, place the nuts on a hard surface and break the husks off by applying pressure with your foot.

Several home producers follow the hulling operation with some form of cleaning operation to remove the remaining husk residue. This can range from hosing the nuts down while spread out on the lawn to soaking and agitating the nuts in a bucket or tub of water.

If you soak the nuts to clean them, you may find that most of the nuts sink; whereas, a few are "floaters." The floaters are frequently nuts that have not filled out and thus should be thrown out at this stage. Check a few to verify that the "floaters" are not productive.

## Drying

Nuts can be cracked at this stage; however, the moisture content of both the shell and meats is high. Place the hulled nuts in burlap bags or onion sacks and store them out of the weather in a drying atmosphere. About mid-December, the nuts should be ready for cracking. If the nuts are dried to about 10 percent moisture content, the nutmeats shrink inside the shell and thus are easier to remove from the cracked shell.

If a producer does choose to crack nuts before drying, it will probably help if the nuts are cracked one day and allowed to dry four to five days in the



**Figure 3. Separate out the "fines" with a 1/4" mesh screen.**

"cracked" state before attempting to remove the nutmeats.

## Cracking

Although there are many ways to crack black walnuts, the standard home nutcracker is not one of them. The shell of black walnuts is very hard and much harder to crack than most popular nut species. Many home producers use a hammer or mallet to crack their black walnuts. Others use nutcrackers designed especially with the black walnut in mind.

Some heavy-duty nutcrackers have been designed especially for cracking black walnuts. They are designed to crack the nuts one at a time. A partial list is available by contacting the author or your local University Extension Center.

These nutcrackers may appear to be too slow for some producers. A faster system is to place a hundred nuts in a burlap bag or heavy-duty plastic sack and hit the nuts with a wooden mallet. (Figure 2) With a little practice one can develop a "feel" for the proper strength of the impact. When striking the nuts, one should "pull" his or her swing so the nut is not crushed, causing it to break into many small pieces.

## Separating

The array of cracked nut pieces and shell fragments will be referred to as the "mass."

In this phase of production, a systematic approach results in more meat production in less time and effort. First, sift out the "fines" with a 1/4" mesh screen. (Figure 3) Discard the fines or use as bird feed. Separate out the large pieces by sifting with chicken wire fencing. The larger pieces probably need re-cracking. The remaining mass is now ready for hand separation.

Make a work station by placing a jelly roll pan or some similar container in a center position and surround the first pan with four cereal bowls or contain-



**Figure 4.** An organized work station helps sort out nuts that need recracking from those with meats that can be removed easily with picks.

ers. (Figure 4) It is important to have good light at your work station. Pour one or two handfuls of the mass into the central pan and spread it out evenly so you can see the large pieces of nutmeats.

Pick out the nutmeat pieces and place them in bowl No 1. Place pieces of shell in bowl No. 2, to be discarded when full. Place nuts that require recracking in bowl No. 3. If the meats can be removed with a "pick," place the nuts in bowl No. 4. After accumulating a bowl of nuts to be "picked," concentrate on this task.

With a little practice, you come to recognize a piece of nut from which the nutmeat can be removed from the shell with a pick without recracking. The technique of removing nutmeats from the shell with a pick improves with practice. Small meat skewers make excellent "picks."

Before storage of the nutmeats you may want to clean them up by sifting them with a 1/8" screen. This will remove any small pieces of dirt or shell that may have fallen into the nutmeats during the sorting and picking process. Kitchen colanders with appropriate size openings are handy for this task.

## Storing

Allow newly shelled nuts to dry for a day or two before refrigerating. Store shelled nuts in the refrigerator or freezer in moisture-proof containers. Freeze for longer storage — up to two years. Uncracked nuts keep best in their shells in dark, cool, dry places.

## Selling

Even though black walnut nutmeats are selling for \$6/pound or more, it is illegal to sell them unless the process of extracting the nutmeats is done in an approved facility and in accordance with state laws governing the regulations and inspection of manufacturers and sale of food. For further information on this subject, consult the Bureau of Community Sanitation, 1730 E. Elm, Jefferson City, MO 65102 (314) 751-6095.

It is legal to sell uncracked walnuts. A group may, for example, choose to collect, husk, clean and package walnuts for sale at a farmers market or similar outlet. Pricing might run in the vicinity of \$.75 to \$1.25/pound.

## Miscellaneous information

Besides being a nutmeat source, uncracked nuts should also be considered as a decorative material for use in a centerpiece, etc. Persons producing nutmeats for their own use might keep in mind that these make a personal and somewhat unusual gift around Christmas time and other occasions.

Black walnuts contribute rich, distinct flavor and crunchy texture to many foods. When added to dishes containing grains or dairy foods, they are a good source of protein. Add black walnuts to baked goods, cookies, cakes, muffins, quick breads and waffles. Use in cheese spreads, sauces, dips, salads and as a vegetable or casserole dish topping. To roast or toast nutmeats, spread nuts on a baking sheet. Heat at 350 degrees F for 5 to 12 minutes or until lightly browned, stirring occasionally.

The return of nutmeats per pound of nuts varies considerably; however, 8 to 10 percent seems to be common for trees selected randomly. A number of horticultural varieties and some well-tended native trees will crack out more than 20 percent. Unchopped (larger pieces) black walnut nutmeats weigh 4 to 5 ounces per cup, i.e. approximately 4 cups per pound.

Obviously, the procedures and systems presented here can be improved. I request that readers offer new suggestions or point out where the methods outlined here may be improved. We will incorporate new ideas in revised issues of this guide. Write: James Pastoret, The School of Natural Resources, 1-24 Agriculture Bldg., University of Missouri-Columbia, Columbia, MO 65211, (314) 882-7242.



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