



# Harvesting & Storing Vegetables

University of California Cooperative Extension  
Stanislaus County

January 2008

We eat vegetable crops as leaves (lettuce), tubers (potatoes), stalks (celery), flowers (broccoli) and roots (carrots). Each structure should be handled with care during harvest and storage to ensure optimal storage life and freshness.

## MATURITY VS RIPENESS

Physiological maturity is the point when a vegetable has completed its growth process. Some vegetables are picked before this process is complete, and others afterwards. The reason for this is based on human preference for taste.

Vegetables picked “immature” include beans, peas, cucumbers, summer squash, okra, eggplant, peppers, tomatillos and sweet corn. If allowed to mature, these vegetables become tough, seedy and inedible.

Vegetables picked “mature” include pumpkin, winter squash and tomato (a tomato is physiologically mature when whitish green, but will have better flavor if left on the vine to ripen).

After picking, vegetables continue to carry on their life processes, eventually ending in decay. To delay decay and ensure good eating quality, vegetables need to be

harvested and stored correctly.

## HARVEST

At harvest, follow directions for each vegetable given in this guide. Avoid bruising or cutting vegetables. Damaged vegetables should be eaten immediately or composted.

When harvesting vegetables, use pruners or a small knife. Be aware that certain vegetables and their plants (such as squash, okra and pumpkin) have prickly vines that can cause skin irritation. Use gloves when necessary.

## STORAGE & REFRIGERATION

The USDA recommends keeping your refrigerator at 40°F or below to maintain freshness and safety in food storage.

Vegetables have varying temperature and humidity needs, and most refrigerators (at 65% humidity) cannot provide for all of these.

Vine crop vegetables such as squash and cucumber prefer to be stored at 45-50°F and 80-90% relative humidity. So do eggplants, okra, green beans and sweet and hot peppers. When kept at lower temperatures, these vegetables



tend to develop pitting and brown spots.

Root crops such as beets, carrots, potatoes, radishes and turnips do best at 32-40°F, and a relative humidity of 85-90%.

Tomatoes keep best at 55-60° F with a 80-85% relative humidity. For best flavor, consume tomatoes immediately or store them on your kitchen countertop. For longer periods of time refrigeration may be necessary, although it has a detrimental effect on flavor.

Like tomatoes, most fresh-picked vegetables can be stored on your kitchen countertop for several days to a week, depending on house temperature.

Ideal temperature and humidity is not attained in most home refrigerators. The storage times listed for each vegetable reflect average storage times for standard refrigerators.

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## **STORAGE & PRESERVATION METHODS**

For best quality, vegetables should be placed into storage within a few hours of harvest. This ensures the optimum flavor of the vegetable is captured in the chosen method of storage.

Many vegetables can also be canned, dried, frozen, or pickled. This guide will include drying, freezing and pickling methods. Canning takes special preparation and should be done with care. See more information below to learn how to preserve vegetables through canning. All publications listed are available at the UC Cooperative Extension Office.

### Canning

Although not used by home gardeners as often as in the past, canning is still a great way to preserve a harvest. To can, use UC ANR publication leaflet 8072: Safe Methods of Canning Vegetables. Access it online at <http://postharvest.ucdavis.edu/datastorefiles/234-568.pdf>

Canning should be done meticulously, as most vegetables (with the exception of tomato) are low in acid. Low acid promotes the growth of a bacterium in food that can lead to botulism,

causing sickness and even death.

### Drying

Drying is a quick and easy way to preserve vegetables. Methods for drying are listed in UC ANR publication #31-406 *Drying Fruits and Vegetables at Home* available online at [http://](http://ucce.ucdavis.edu/files/filelibrary/1808/62.PDF)

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### Freezing

For information on how to freeze vegetables, access the Purdue Extension Department of Food and Vegetables article *Freezing Vegetables at Home* at <http://www.ces.purdue.edu/extmedia/CFS/CFS-134-W.pdf>

### Pickling

According to the University of Minnesota Extension, pickling isn't just for beets and cucumbers. Their website features a guide called *Pickled Products* with recipes for pickling everything from beans to zucchini. Access it at <http://www.extension.umn.edu/info-u/nutrition/BJ831.html>

## **SPECIAL NOTE**

For each vegetable listed, common methods for canning, drying, freezing, and/or pickling are given.

Additional preparation tips are given for selected vegetables. Methods in the guide are taken from University websites, which may not list all of the possible methods known to gardeners and cooks.

### Asparagus

This crop takes 3 years to establish. In the third year, harvest 6-8" tall stalks just below the soil line. Do not wash. Store in the refrigerator for up to 2 weeks. Keep stalks upright.

To keep asparagus plants in good health, stop harvesting when spears begin to decline in diameter.

Although often prepared boiled, asparagus baked on a cookie sheet become crunchy and flavorful. Add a drizzling of olive oil and a pinch of salt and pepper and bake at 400°F for 12-20 minutes.

*Asparagus can be canned, pickled or frozen.*

### Artichoke

Harvest by cutting 2-3" below firm flower bud that is still 2-4" across. Do not wash. Store in the refrigerator for 1-2 weeks.

Insects often hide deep inside artichokes. To remove them, prepare warm water and place artichokes upside down for 5-

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10 minutes.

Snap off any coarse or discolored outer leaves. Turn the artichoke on its side and slice off the top 1/4 of the leafy portion, then use scissors to cut off prickly ends on remaining leaves.

Cook until tender, then submerge in cool water. Drain upside down. Reach into the center and remove the pale, purple tipped cone of thin leaves and scoop out the fuzzy choke with a metal spoon or melon baller. Eat plain or with a favorite dipping sauce.

*Artichoke hearts can be canned or pickled. Entire artichokes can be frozen.*

## **Beans, Lima**

Harvest when pods are plump and bright green; beans should pop out of the pod easily when end is squeezed. Store in the refrigerator for up to 1 week.

*Lima beans can be canned or frozen.*

## **Beans, Snap (String)**

Harvest when pods are plump, not bulging. Pods should easily snap off the plant when ready. Harvest continuously, as plants stop producing when beans ripen on the plants. Remove strings and wash before storing to retain moisture content. Store in the

refrigerator for up to 1 week.

*String beans can be canned, frozen or pickled.*

## **Beans, Soy**

Harvest when pods are thick and bright green, before they turn yellow. For an easy harvest, uproot the entire plant, then cut off the pods.

Fresh soybean pods are difficult to open. Boil for about 5 minutes to soften, then immerse immediately in cool water for 5 minutes. To remove beans, simply squeeze the pods. Soybeans can be prepared by boiling or steaming for 15-30 minutes in lightly salted water. This finished vegetable is known as "edamame."

For "dry" soy beans, wait until plant has turned brown, then uproot and cut off the pods. Seeds should be easy to remove.

To prepare dried soybeans, wash, then soak for 8-10 hours in twice the amount of water. Refrigerate while soaking. Use them in any recipe that calls for navy beans or soybeans.

*Soy beans can be canned, dried or frozen.*

## **Beets**

Beet greens can be harvested lightly. For storage, do not

wash. Refrigerate for up to 3 days.

Beets are best when 2" in diameter, otherwise they become woody. After harvest, wash roots and trim foliage to 1" long. Store in the refrigerator for up to 5 months.

Beet greens are a tasty addition to salads or added to a stir fry.

Beets are commonly eaten pickled but fresh cooked beets have a savory flavor. Beets are also the main ingredient in borscht (a soup). See the last page for a recipe adapted from the Sonoma County Master Gardener web page.

*Beets can be canned, frozen, pickled or dried.*

## **Bok Choy**

Harvest when plants have reached 12" tall. For storage, trim roots and remove outer leaves. Store in the refrigerator for up to 2 weeks.

Bok choy can be added to soups or stir fry. Fresh bok choy is a crisp and flavorful addition to salads.

*Bok choy is best used fresh.*

## **Broccoli**

Harvest by cutting 6-7" below the flower head when flower buds are firm and closed.

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Store in the refrigerator for up to 2 weeks.

*Broccoli can be frozen.*

## Brussels sprouts

Harvest when sprouts (buds) are firm and take on a slightly yellow appearance. Remove buds highest on the plant first, but do not remove leaves. Store in the refrigerator unwashed, for up to 1 week.

*Brussels sprouts can be canned, pickled or frozen.*

## Cabbage

Harvest when outer leaves are a uniform green or purple color (depending on variety). Firmly grab the cabbage head and twist, snapping a few roots until the head comes free from the soil. Remove loose, outer leaves and store in the refrigerator for up to 2 weeks.

*Cabbage can be pickled.*

## Carrots

Harvest when small for best taste. For baby carrots, pull when roots are 3" long. After harvest, wash and trim tops to 1/2". Store in the refrigerator for up to 8 months without tops. Carrots keep well in the ground, but should be harvested before weather warms too much and they begin to flower.

*Carrots can be canned or frozen.*

## Cauliflower

When curds are 1-2" in diameter, tie the outer leaves above the head to protect them from sunlight. Harvest 2 weeks later. Chill immediately. Store in the refrigerator, unwashed, for up to 2 weeks.

*Cauliflower can be frozen or pickled.*

## Celery

Harvest when plants are 12-15" tall. Pull out whole plant, cut off roots and wash. Store in the refrigerator for up to 1 week.

*Celery is best used fresh.*

## Corn

Harvest when silks begin to dry and turn brown. Kernels should yield a milky liquid when pierced with a fingernail. To harvest, twist the ear with a downward pull.

Store in the refrigerator for up to 5 days. Corn loses flavor as soon as it is harvested. For best taste, use as soon as possible.

*Corn can be canned or frozen.*

## Cucumber

Harvest slicing cucumbers, when 6" long. Store in the refrigerator for up to 1 week.

To make sweet pickles, harvest when 1 1/2 to 2" long. For dill pickles, harvest when 3-4" long. Remember to purchase the correct kind of cucumber seed or transplant for pickling, as salad cucumbers do not make good pickles.

*Cucumbers can be pickled.*

## Eggplant

Harvest using pruners or scissors, leaving a 1" stem. Pick small when color is bright, as large eggplants tend to become seedy and have a bitter skin. Store in the refrigerator for up to 1 week. For best results, use immediately after picking.

Eggplant is a versatile vegetable and can be baked, added to a stir fry, or stuffed. Japanese eggplants are a good alternative to commonly grown types, and their size makes them easy to use in cooking.

To make a simple hors d'oeuvre, boil eggplant until tender and drain (do not overcook). Slice crosswise into 1" thick pieces. Arrange pieces on a no-stick baking sheet and add a teaspoon of olive oil, a tomato slice or spoonful of tomato sauce, a slice of onion and a piece of mozzarella cheese. Bake at

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350°F for 10 minutes or until cheese melts.

*Eggplant can be canned.*

## Garlic

Harvest when foliage loses color and tops fall over. Dry bulbs in a well-ventilated area for 3 weeks. Then, brush off dirt and trim roots. Braid together or store in mesh bags or a mesh basket. Store in the refrigerator for 2-3 months.

*Garlic can be pickled.*

## Jicama

Harvest at any time during root development. Jicama can weigh up to 6 pounds, but are more easily managed (and less woody) at just 1 pound. Pull from the ground by the roots, or use a spading fork to loosen the soil and then remove the plants. Jicama stores well in the ground, and can be pulled when needed. Wash; store in the refrigerator for about 1 week.

Although the outer skin of jicama is somewhat tough, it can be easily removed with a paring knife. To serve raw, cut to desired length, then submerge in cold water and refrigerate until needed to retain crispness. Jicama adds sweet flavor to a stir fry.

*Jicama can be pickled.*

## Kale

Harvest leaves when 4-6" long, or pull entire plant if mature. Kale can withstand frost, and grows well during cool months. Do not wash; store in the refrigerator for up to 10 days.

For use, wash and pull off outer leaves, discarding the center rib. Kale can be stir fried, sliced lengthwise and added to broth or bean soups. It can also be boiled in salt water or sautéed in butter.

*Kale is best used fresh.*

## Leek

Harvest when 1/2 to 2 1/2" in diameter. The smaller the leek, the more tender. Use a spading fork to gently remove leeks from the ground. Leave 1" of the root on and store without washing them. Store in the refrigerator for up to 1 week.

Leek "flags" have crevices where dirt can hide, so wash thoroughly. Leeks can be boiled, steamed or sautéed. Cook until easily pierced with a knife. Use as a vegetable side dish or add to soups. *Leeks are best used fresh.*

## Lettuce

Harvest leafy varieties when outer leaves are 4-6" long. Head varieties should be picked when head is

moderately firm and good-sized. Wash and store in the refrigerator for up to 2 weeks.

*Lettuce is best used fresh.*

## Okra

Harvest when pod is fully developed, usually between 4-10 days after the flower has bloomed. Cut or snap pods off plants when pods reach 2-3." Harvest continuously, as plants stop producing when pods ripen on the stems.

The okra plant can cause skin irritation, so use gloves when handling any part of the plant. Store in the refrigerator for up to 1 week.

Sliced okra exudes a milky liquid used to thicken soups and stews. It's the ingredient that gives gumbo its texture. Okra is often deep-fried. Many recipes with okra call for lemon juice, which helps eliminates the slippery texture.

*Okra can be canned, frozen or pickled.*

## Onion

Harvest onions when 10% of the tops begin to dry. Onions can be "stored" in the ground until you are ready to use them, simply harvest those with the driest tops first.

To prepare harvested onions for storage, brush off dirt and

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trim roots. Cut tops off to 1". Store in the refrigerator for up to 2 weeks.

Yellow onions store the best, and can be stored for months in a cool place away from light and moisture. Red and white onions can be stored for a lesser amount of time.

*Onions can be canned, frozen or pickled.*

## Peas

Harvest pods when they are shiny green and 2-3" in length. To harvest, grasp the vine with one hand and pull pods with the other to prevent tearing of the vines. For edible pod types (snow, Chinese), harvest when pods are about 3" long. Wash and chill all peas immediately after harvest. Unshelled peas can be stored in the refrigerator for up to 1 week.

*Peas can be canned, dried, frozen or pickled.*

## Peppers, Bell

Harvest when pepper is firm and green, red, yellow or orange, depending on variety. Store in the refrigerator for up to 2 weeks.

*Peppers can be canned, dried, frozen or pickled.*

## Peppers, Hot

Harvest when firm and desired color is reached. All

peppers will eventually turn orange or red, this does not mean they are hotter. Store in the refrigerator for up to 2 weeks.

*Hot peppers can be canned, dried or pickled.*

## Potatoes

Harvest when vine dies back and skin is firm, but not flaky. Carefully dig up potatoes with a spading fork or a shovel. Brush off dirt but do not wash. Potatoes need high humidity (85-90%) and 40°F. At these settings, potatoes can be stored for 2-4 months.

Do not harvest and/or eat unripe (green-colored) potatoes, as they contain a poisonous alkaloid that should not be consumed.

*Potatoes can be canned.*

## Pumpkin

Harvest when the vine begins to die back, before the first frost. Use pruners or a knife to harvest, and keep a portion of the stem attached. Pumpkin vines and vegetables can irritate skin, so use gloves while handling. Store in a cool, dry place for up to 2 months. Do not store in the refrigerator, as pumpkins are sensitive to temperatures below 45°F.

Pumpkins aren't just for pumpkin pie. Try using them

in interesting dishes like a vegetable curry or pumpkin soup.

*Pumpkin can be canned or frozen.*

## Radish

Harvest when diameter is approximately 1". Wash, remove tops and trim roots. Store in the refrigerator for up to 1 month.

*Radishes can be pickled.*

## Spinach

Harvest leaves when 4-6" long. Pull entire plants if all leaves are mature. Wash leaves thoroughly; store in the refrigerator for up to 10 days.

*Spinach can be frozen.*

## Squash, Summer

Harvest when 4-6" long. Larger squash tend to be seedy and tough. Squash vines and vegetables can irritate skin, so use gloves while handling. Store in the refrigerator for up to 1 week.

*Squash can be frozen or pickled.*

## Squash, Winter

Harvest when skin is hard and can't be dented with a fingernail, vine will also have begun dying. Remove from vine before frost, as this can damage the squash. Keep a portion of the stem attached.

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Squash vines and vegetables can irritate skin, so use gloves while handling. Storage times vary by squash type; see UC Cooperative Extension Stanislaus publication, *Squash in Your Garden*.

All winter squash have delicate and/or buttery flavors best enjoyed when baked.

*Winter squash can be canned. When freezing winter squash, cook it first.*

## Tomatillo

Harvest when green and plump. If fruit starts to turn yellow, the tomatillo has become over-ripe. Store in the refrigerator (in their husks) for up to 3 weeks.

Tomatillos give the green sauce served in Mexican restaurants their tanginess. They are a great addition to salsa recipes, too. Tomatillo flavor can be somewhat sharp, but adding a little sugar to recipes can balance their flavor. To use, remove husks and wash.

*No information on preserving tomatillos could be found.*

## Tomato

Harvest when desired color has been attained, depending on variety. Use pruners or cut off tomato to avoid damaging plant. Tomatoes lose flavor when stored below 40°F, so

store them on your kitchen counter until ready for use. Harvest mature green tomatoes when they are of normal size and have a whitish-green skin color.

*Tomatoes can be canned, dried, pickled (usually green tomatoes)*

## Turnips

Turnip greens can be harvested when 4-6" long. They do not store well and can be kept in the refrigerator for about 2-3 days. Continual harvest of the tops will impede root growth. Turnip roots should be harvested when 1 1/2 to 2 1/2" in diameter. Store in the refrigerator, unwashed, for up to 3 months.

## **LOCAL RECIPE**

Here is a pickling recipe that won Sandra Walker of Stanislaus County an award at the Stanislaus County Fair in 1995.

### **Blue Ribbon Kosher Dill Cucumber Pickles**

20 pounds 3-4" cucumbers  
6 cups cider or white distilled vinegar (5% acetic acid)  
9 cups water  
3/4 cup salt  
3/4 cup sugar  
1 tsp mustard seed (per quart)  
2 garlic cloves (per quart)  
3 heads fresh dill or 1 tbs dry seed (per quart)

2 hot, dried red peppers

Wash 18 quart jars, lids and screw bands in hot, soapy water. Prepare lids according to directions on box. To prevent jar breakage, keep in hot water or oven at 250°F.

Wash cucumbers thoroughly 2 or 3 times. Remove all flower and stem ends, but do not scrub. Combine vinegar, water, salt and sugar. Heat to boiling.

Add to each quart jar: dill, peppers, garlic and mustard seed. Pack cucumbers and fill jar with hot vinegar solution 1/2" head space (space between liquid and top of jar). Remove any bubbles with a spatula, then wipe rim with a clean cloth. Seal with a pre-treated canning lid and ring.

Process 25 minutes at 170-190°F using a water bath canner. Do not touch jars for 24 hours to encourage proper seal. Wait about 2 weeks before opening and tasting. Enjoy!

For more pickling recipes, visit the UC Cooperative Extension Office.

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## Late-Summer Borscht

8 beets  
1 scallion, (white part) finely  
chopped  
1/3 cup beef bouillon  
1/4 cup sour cream  
1 tsp white wine vinegar  
Salt & pepper to taste

Cook beets, then place into  
blender. Add scallion, beef  
bouillon, sour cream, white  
wine vinegar, and sprinkling  
of salt and pepper. Blend until  
smooth. Chill, serve with a  
dollop of sour cream.

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