

Freezing Vegetables

Freezing is a popular, simple way to preserve vegetables. By carefully following directions, you can enjoy top quality, nutritious vegetables year-round.

GENERAL DIRECTIONS

1. Choose top quality vegetables (produce) at optimum maturity and freshness. Correct freezing techniques will maintain quality but will not improve it.
2. If vegetables cannot be frozen immediately, refrigerate to retain maximum freshness.
3. Work with small quantities, enough for only a few containers at a time.
4. Wash and drain all vegetables before removing shells or skins. Wash small quantities at a time through several changes of cold water. Do not soak. Lift vegetables out of water to prevent dirt from re-depositing on produce.
5. Prepare produce according to chart (see SPECIFIC DIRECTIONS FOR FREEZING VEGETABLES).
6. If desired, blanch vegetables, cool quickly and drain (see BLANCHING and COOLING).
7. Fill freezer containers. Freezer bags or rigid plastic freezer containers are suitable. Allow enough headspace in rigid containers for food to expand.
8. Label containers with date, contents and amount of vegetable.
9. Freeze prepared product immediately. Leave space between packages so they freeze more evenly and quickly. Large ice crystals form in vegetables when too much is placed in the freezer at one time and the freezing process takes too long. Large ice crystals result in texture loss (softening or mushiness) and moisture loss when produce is thawed. When vegetables are frozen quickly, smaller ice crystals are formed, resulting in a better quality product. As a guideline, freeze 2 lb (1 kg) of produce per cubic foot of freezer space per 24 hour period.
10. The temperature of a freezer should be 0°F (-18°C) or lower.
11. For best quality and maximum nutrient value, use frozen vegetables within one year.

USING FROZEN VEGETABLES

Most frozen vegetables are best when cooked directly from the frozen state.

Just prior to cooking frozen corn on the cob, thaw under cold running water.

Cook just until heated through and tender, usually about half the cooking time for the same fresh vegetable.

BLANCHING

All vegetables contain enzymes which enable the vegetables to mature. Freezing slows this maturing, or aging, process but does not stop it. Blanching (scalding vegetables in boiling water or steam for a short time) stops the enzyme action that can cause loss of flavour, colour and texture in frozen vegetables. Blanching also cleans the surface of the vegetables, brightens the colour and softens the vegetables making them easier to pack for freezing.

Follow blanching times carefully. Underblanching encourages enzyme activity and is worse than not blanching at all. Overblanching results in loss of flavour, colour and nutrients.

WATER BLANCHING

Use a blancher with blanching basket and lid, a pasta pot with fitted strainer and lid or a large pot with a wire basket and lid.

Bring 1 - 2 gallons (4 - 8 L) water to a vigorous boil and leave over high heat throughout the blanching process. A large amount of water is used so the water will resume boiling quickly after the vegetables have been added. Do not add salt unless otherwise specified.

Blanch 2 cups (500 mL) of vegetables for every 1 gallon (4 L) of water. Place prepared vegetables in basket or strainer and lower into vigorously boiling water. Cover pot with lid.

Begin timing immediately (see SPECIFIC DIRECTIONS FOR FREEZING VEGETABLES for blanching times).

Blanching water may be reused several times, adding more water as needed.

STEAM BLANCHING

Some vegetables may be steam blanched.

Use a pot with a tight lid and a basket that holds vegetables above the water in the bottom of the pot.

Bring water to a vigorous boil with the lid on the pot. Leave pot over high heat throughout the blanching process. Do not add salt unless otherwise specified.

Place only enough vegetables to form a single layer in the basket, so that the steam reaches all surfaces quickly. Place basket in pot over boiling water. Cover pot with lid.

Begin timing immediately (see SPECIFIC DIRECTIONS FOR FREEZING VEGETABLES for blanching times).

Blanching water may be reused several times, adding more water as needed.

COOLING

As soon as blanching is complete, the vegetables must be cooled to stop the cooking process.

Plunge basket of vegetables into a large quantity of ice water (water containing ice cubes).

Cool vegetables completely in ice water, about the same amount of time as they were blanched.

Drain vegetables thoroughly after cooling. Pour out onto layers of paper towels or clean tea towels. Any extra moisture left with the vegetables can cause a loss of quality when vegetables are frozen.

TYPES OF PACKS

DRY PACK

After vegetables are blanched, cooled and drained, package immediately in freezer bags or freezer containers.

Remove as much air as possible. Seal tightly.

TRAY PACK

After vegetables are blanched, cooled and drained, spread in a single layer on a tray and freeze.

When frozen, package vegetables promptly, remove as much air as possible and return to freezer.

Tray-packed vegetables remain loose and can be poured from the container and the package reclosed.

Specific Directions for Freezing Vegetables

Asparagus

- Select young, tender spears.
- Wash thoroughly to remove grit.
- Trim off scales and tough ends. Cut, if desired.
- Water blanch:

Small spears	2 minutes
Medium spears	3 minutes
Large spears	4 minutes

Beans (broad)

- Wash, shell, sort by size and rinse.
- Water blanch:

Small	2 minutes
Medium	3 minutes

Beans (green or wax)

- Wash and snip ends. Cut, if desired.
- Water blanch:

Cut	2 minutes
Whole	3 minutes

Beans (lima)

- Harvest while seed is green.
- Wash, shell, sort by size and rinse.
- Water blanch:

Small	2 minutes
Medium	3 minutes

Beets

- Select young, tender beets.
- Wash and trim tops, leaving 1/2 inch (1.25 cm) of stems and tap roots to prevent bleeding of colour during cooking.
- Cook in boiling water until tender:

Small	25 - 30 minutes
Medium	45 - 50 minutes
- Cool quickly in ice water. Peel; remove stems and tap roots. Cut into slices or cubes or grate coarsely.

Broccoli

- Select firm, tender stalks with compact heads.
- Wash; remove leaves and woody portions.
- Cut into 1 1/2 inch (3.75 cm) pieces.
- If insects are present, soak broccoli in solution of 4 tsp (20 mL) salt to 4 quarts (4 L) water for 30 minutes before blanching.
- Water blanch: 3 minutes
- Steam blanch: 5 minutes

Brussels Sprouts

- Select green, firm, compact, insect-free heads.
- Wash thoroughly; trim and remove outer leaves. Sort by size.
- Water blanch:

Small	3 minutes
Medium	4 minutes
Large	5 minutes

Cabbage

- Wash; discard tough outer leaves.
- Cut into thin wedges, coarsely shred, or separate into leaves.
- Water blanch: 1 1/2 minutes
- *Suitable for cooked dishes only.*

Carrots

- *Raw carrots will keep for several months if left unwashed and stored in a cold storage room or washed, placed in paper towel-lined perforated plastic bags in refrigerator.*
- If freezing, select young carrots of a coreless variety.
- Wash; peel or scrape.
- Water blanch:

Small, whole	5 minutes
Diced, sliced or julienned	2 minutes

Cauliflower

- Select compact heads.
- Wash and trim off leaves.
- Cut into 1 inch (2.5 cm) florets.
- If insects are present, soak florets in solution of 4 tsp (20 mL) salt to 4 quarts (4 L) water for 30 minutes before blanching.
- Water blanch: 3 minutes in water containing 4 tsp salt (20 mL) to 4 quarts (4 L) water

Celery

- Wash and cut into 1 inch (2.5 cm) pieces.
- Water blanch: 3 minutes
- *Suitable for cooked dishes only.*

Chard Stems (For chard leaves, see Greens)

- Wash.
- Water blanch: 2 minutes

Corn (cream-style)

- Remove husk and silk. Wash and trim cobs.
- Water blanch: 4 minutes
- Cool very quickly in ice water.
- Cut kernels from cob halfway through kernel. Scrape cob to remove juice and remaining kernel. Combine and package.

Corn on the Cob

- Remove husk and silk. Wash and trim cobs.
- Water blanch:

Small cobs	7 minutes
(1 1/4 inches/3 cm or less in diameter)	
Medium cobs	9 minutes
(1 1/4 - 1 1/2 inches/3 - 3.75 cm in diameter)	
Large cobs	11 minutes
(over 1 1/2 inches/3.75 cm in diameter)	
- These times include blanching of the cobs and kernels. Under blanching may cause a grass-like taste.
- Cool very quickly in ice water.

Corn (whole kernel)

- Remove husk and silk. Wash and trim cobs.
- Water blanch: 4 minutes
- Cool very quickly in ice water.
- Cut kernels off close to cob.

Garlic

- *Freezing not recommended due to flavour changes and strong odour in freezer.*

Greens (beet, chard, kohlrabi, spinach, turnip)

- Select tender leaves.
- Wash; trim off stems.
- Water or steam blanch: 30 seconds or just wilted

Herbs

- Wash, drain and pat dry with paper towels.
- Chop, if desired. Do not blanch.
- Wrap small portions in plastic wrap and place in freezer bag. *May darken on thawing.*

Kohlrabi

- Select tender kohlrabi.
- Wash and cut off tops and roots. Peel.
- Tiny kohlrabi may be left whole.
- Cut larger kohlrabi into 1/2 inch (1.25 cm) cubes.
- Water blanch:

Cubed	1 minute
Tiny whole	3 minutes

Leeks

- Trim and split lengthwise; wash thoroughly to remove grit.
- Do not blanch.
- Slice; package in small amounts.
- *Double wrap to prevent odours in freezer.*

Mixed Vegetables

- Blanch each vegetable as recommended.
- Combine as desired.

Mushrooms

- Select mushrooms with tightly closed caps.
- Wash and trim. Do not soak.
- To prevent darkening, dip in solution of 1 tsp (5 mL) lemon juice to 2 cups (500 mL) water.
- Sauté small batches in butter for 4 minutes, chill in refrigerator and freeze.

Onions

- *Freezing not recommended except in cooked dishes. Blanching and freezing result in a poor texture and a very strong odour in freezer.*
- *Bulb onions store best in a cool dry place.*

Parsnips

- Select tender parsnips. Wash.
- Peel; cut into 1/2 inch (1.25 cm) slices or cubes.
- Water blanch: 2 minutes
- *Parsnips keep well in the ground until the ground freezes; store in a cold storage room.*

Peas (edible pods: Chinese, snow, sugar)

- Select bright green, flat, tender pods. Wash.
- Remove stems, blossom ends and any strings.
- Water blanch:

Small pods	1 1/2 minutes
Large pods	2 minutes

Peas (green)

- Select young, tender peas.
- Wash, shell and rinse.
- Water blanch: 1 1/2 minutes

Peppers (bell, hot)

- Wash, halve and remove seeds.
- Do not blanch.
- Finely chop or slice in thin rings.
- *Suitable for cooked dishes only.*
- *Hot Pepper Caution: Hot peppers cause severe skin and eye irritation. Wear rubber gloves when handling hot peppers and avoid touching any exposed skin.*

Potatoes

- *Freezing not recommended due to poor texture and flavour.*
- Cooked mashed potatoes may be frozen for short periods of time. Expect significant flavour and texture changes.

Potatoes (french fries)

- Select mature potatoes; store for 30 days.
- Wash, peel and cut into strips.
- Rinse; dry thoroughly. Deep fry small quantities in hot oil for about 5 minutes or until tender but not brown.
- Drain on paper towels; cool and freeze.
- *To serve, bake on cookie sheet at 475 F (240 C) until browned.*

Pumpkin

- Wash, halve and remove seeds.
- Steam or bake until tender.
- Scoop out pulp; mash or puree.
- Simmer to desired consistency.
- Cool quickly. Package in desired amounts.

Spaghetti Squash

- Prepare and cook as winter squash.
- Remove strands of squash using a fork.

Squash, Summer

(chayote, pattypan, vegetable marrow)

- Wash and cut into 1/2 inch (1.25 cm) slices.
- Steam blanch: 3 minutes
- Cool on paper towel-lined trays in refrigerator.

Squash, Winter

(acorn, butternut, hubbard)

- Wash, halve and remove seeds.
- Steam or bake until tender.
- Scoop out pulp; mash or puree.
- Cool quickly. Package in desired amounts.

Sweet Potatoes

- Wash and cook until tender.
- Cool and peel. Leave whole or slice. May also be mashed while hot; cool and freeze.

Tomatoes

- Select firm, ripe tomatoes.
- Wash. To remove skins, dip in boiling water 30 seconds and ice water 30 seconds. Peel and core. Freeze whole or cut into pieces.
- *Suitable for cooked dishes only.*
- May also be stewed; cooled, packaged and frozen.

Tomatoes (green)

- Select firm, green tomatoes. Wash.
- Core and slice 1/4 inch (6 mm) thick.
- Layer slices, separating layers with wax paper.
- *Darkening may occur.*

Turnips

- Wash, peel and cut into 1/2 inch (1.25 cm) cubes.
- Water blanch: 2 minutes

Zucchini

- May be blanched as for Summer Squash.
- May also be grated and frozen unblanched for baking. Measure and label quantity. Use when barely thawed to minimize moisture loss. Do not drain before using.

Vegetable Juices

- Wash and prepare vegetables. Extract juice.
- Vegetable juice **must** be heated (pasteurized) by boiling for 1 minute and then cooled before freezing. Juice from juicers (machines that extract juice using steam) can be frozen without additional heating.