

Freezing Vegetables

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Fresh, tender vegetables right from the garden are best for freezing. If vegetables cannot be frozen immediately after harvesting, store them in the refrigerator to preserve freshness until they can be prepared and frozen.

Not all vegetables freeze well. Those that don't include green onions, lettuce and other salad greens, radishes, cucumbers, and tomatoes (except as juice or to use in cooking). Uncooked potatoes often develop an uncharacteristic sweet flavor when frozen. Be sure to contact your county extension office for information on recommended varieties of vegetables for North Dakota to assure a good crop to fill the freezer.

Containers For Freezing

Choose containers that are made for freezer storage. These preserve the quality of the vegetables by keeping moisture in and air out. Loss of moisture causes brownish-white spots on food known as freezer burn. Freezer burn does not actually spoil the food but can cause toughness and often results in off-flavors.

Plastic freezer bags and rigid freezer containers are convenient for freezing vegetables. Plastic sandwich bags, bread wrappers and cartons from dairy products such as cottage cheese, sour cream or milk are not suitable for long-term freezer storage.

Blanching

Blanching is scalding the vegetables in water or in steam for a short period of time. It is a very important step in

freezing vegetables because it slows or stops the action of enzymes. These enzymes are essential for growth and maturation of the plant. If the enzyme action is not stopped before freezing, the vegetables may develop off-flavors, discolor, or toughen so that they may be unappetizing in a few weeks.

Blanching times vary with the size and kind of vegetable. The times recommended are just long enough to stop or destroy the enzymes. Be sure to follow the recommended blanching times. In underblanched vegetables enzyme action continues. Overblanched vegetables are cooked and have a leftover look when served.

To blanch in boiling water

Use a blancher, which has a blanching basket and cover, or fit a wire basket into a large kettle with a cover. Use at least 1 gallon of water for each pound of vegetables. Put the vegetables into the basket and lower the basket into the boiling water. Cover. Using a high heat setting, water should return to boiling in about one minute. Use an accurate timer and blanch for the time specified for individual vegetables. If boiling is not resumed in a minute, you are blanching too large a quantity at one time.

To blanch in steam

Put 1 to 2 inches of water in a kettle and bring to a rolling boil. Suspend a thin layer of vegetables in a wire basket or cheesecloth over the rapidly boiling water. Cover, keep the heat on high and steam blanch vegetables the time recommended in the table.

Blanching in the microwave

You may blanch many vegetables with microwave using the following tips.

Prepare fresh vegetables carefully. Don't blanch more than 4 cups of prepared leafy green vegetables or 2 cups of all other prepared vegetables at one time. Always add ¼ cup of water to the vegetables before blanching. Blanching times increase unpredictably for larger food pieces or quantities and larger amounts of water.

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Use a 2-quart round, glass casserole or a similar-sized and -shaped microwave container. Do not use a metal container or lid. Cover the container with Saran wrap or similar film before blanching as glass lids unpredictably increase blanching times.

Use a medium-sized to large oven (more than 1 cubic foot) and an appropriate blanching time for individual vegetables and your oven type.

Cooling

After vegetables are heated they should be cooled quickly and thoroughly to stop the cooking. After heating, plunge the basket of vegetables immediately into a large quantity of cold water. Change water frequently or use cold running water or iced water. If ice is used you'll need about one pound of ice for each pound of vegetables. It takes about as long to cool the vegetables as it does to heat them.

When vegetables are cool, remove from water and drain thoroughly.

Methods of Packing Vegetables

In using rigid containers leave one-half inch head space. Food expands when it freezes and the top may pop off the container if it is too full.

In using freezer bags, press air out of unfilled part of the bag, seal and freeze. If the bag has a twist closure, be sure to twist the bag and fold the bag back in a gooseneck before securing the twist. If this is not done, air will rush back into the bag.

Vegetables can be packed either solid or loose.

Solid pack: Put drained vegetables into freezer containers. Pack tightly to cut down on the amount of air in the container or bag. Seal and freeze.

Loose pack: This enables you to pour out as much as you want from a large package. Spread the drained vegetables in a single layer on a tray and freeze. As soon as these are frozen, pour into rigid freezer containers or bags, seal and return to freezer. Remove as you need them.

Freezing the Vegetables

Put the packaged vegetables in the freezer as soon after packing as possible. Put no more unfrozen food into the home freezer than it will freeze within 24 hours. This is about two to three pounds per cubic foot of freezer capacity. Overloading slows the rate of freezing and foods can lose quality. For quickest freezing, leave a small space between packages so air can circulate freely. After the vegetables are frozen, packages may be stored close together. Store at 0 degrees Fahrenheit or lower.

How to Use Frozen Vegetables

Most frozen vegetables should be cooked without thawing them first. Corn on the cob is an exception – it should be partially thawed so the cob is heated through by the time the corn is cooked. This takes about 10 minutes.

Do not overcook vegetables. Cook only until tender. Most vegetables have been partially cooked when blanched, so less cooking time is required than for fresh vegetables. Cook in a small amount of water or use steam.

Note: The microwave oven does an excellent job of cooking frozen vegetables. Follow the manufacturer's recommendations for times and power selections.

PREPARATION TABLE FOR FREEZING VEGETABLES

VEGETABLE	PREPARATION	BLANCHING TIME (in boiling water unless otherwise stated)
ASPARAGUS	Wash thoroughly, sort by size. Cut into 2-inch lengths or leave in spears. Blanch, cool and drain. Package, seal and freeze.	Small stalks - 2 minutes Medium stalks - 3 minutes Large stalks - 4 minutes
BEANS, lima	Select beans ready for table use with slightly rounded, bright green pods. Shell, wash and sort according to size. Blanch, cool and drain. Package, seal and freeze.	Small beans - 2 minutes Medium beans - 3 minutes Large beans - 4 minutes
BEANS, green or wax	Select young tender beans. Wash and remove ends. Leave whole, slice or cut into 1- to 1½-inch lengths. Blanch, cool and drain. Package, seal and freeze.	3 minutes
BEETS	Wash and sort according to size. Trim tops leaving ½ inch of stem. Cook in boiling water until tender. Cool, peel and cut into slices or cubes. Package, seal and freeze.	Cook: Small beets - 25-30 minutes Medium beets - 45-50 minutes

VEGETABLE	PREPARATION	BLANCHING TIME (in boiling water unless otherwise stated)
BROCCOLI	Wash and trim. If insects are present soak ½ hour in a solution of 4 teaspoons salt to 1 gallon of cold water. Split lengthwise into pieces no more than 1½ inches across. Blanch, cool and drain. Package, seal and freeze.	In water - 3 minutes In steam - 5 minutes
BRUSSELS SPROUTS	Select green, firm compact heads. Make sure no insects are present. Trim, removing coarse outer leaves. Wash and sort. Blanch, cool and drain. Package, seal and freeze.	Small - 3 minutes Medium - 4 minutes Large - 5 minutes
CABBAGE (for cooked dishes)	Select fresh, compact heads. Remove coarse outer leaves. Cut into medium or coarse shreds, thin wedges, or separate leaves. Blanch, cool and drain. Package, seal and freeze.	1½ minutes
CARROTS	Select tender, mild-flavored carrots. Remove tops. Wash and peel. Leave small carrots whole. Cut others into ¼-inch cubes, thin slices or lengthwise strips. Blanch, cool and drain. Package, seal and freeze.	Small, whole - 5 minutes OR Diced, sliced or strips - 2 minutes
CAULIFLOWER	Choose tender, firm, snow-white heads. Break into pieces about 1 inch across. Wash. If insects are present, soak ½ hour in a solution of 4 teaspoons salt to 1 gallon of cold water. Drain. Blanch, cool and drain. Package, seal and freeze.	3 minutes
CORN, sweet	Select ears with plump kernels and thin sweet milk. Husk ears, remove silk and wash.	
whole kernel and creamed	Blanch, cool and drain. For whole kernel corn – cut corn off cob about 2/3 the depth of kernels. For cream style corn – cut at ½ depth of kernels and scrape cob with back of knife to remove juice. Package, seal and freeze.	4 minutes
on the cob	Sort ears according to size. Small ears – 1¼ inches or less in diameter. Medium ears – 1¼-1½ inches in diameter. Large ears – over 1½ inches in diameter. Blanch, cool and drain. Package, seal and freeze.	Small ears - 7 minutes Medium ears - 9 minutes Large ears -11 minutes
EGGPLANT	Wash, peel and slice into slices 1/3 inch thick. Preserve color by soaking 5 minutes in a solution consisting of 4 tablespoons salt to 1 gallon of water. Ascorbic acid mixture, used according to package instructions, can be substituted. Blanch, cool and drain. Package, seal and freeze.	4 minutes
GREENS, beet greens, collards, chard, kale, mustard greens, spinach, turnip greens	Select tender leaves. Wash and remove stems. Blanch, cool and drain. Package, seal and freeze.	Collards - 3 minutes Other greens - 2 minutes Very tender leaves -1½ minutes
KOHLRABI	Select young, tender, mild-flavored kohlrabi. Remove tops and roots. Wash, peel and leave whole or dice into ½-inch cubes. Blanch, cool and drain. Package, seal and freeze.	Whole - 3 minutes Cubes -1 minute
MUSHROOMS	Choose mushrooms free of spots. Sort by size; wash and trim ends. Blanch, cool and drain. Optional method: saute in butter or margarine until tender. Package, seal and freeze.	In steam: whole - 5 minutes Button or quarters - 3½ minutes Slices - 3 minutes
ONIONS	Peel, wash and chop fully mature onions. Loosely pack and freeze in large freezer bags. Take out as needed.	No heat treatment needed
PARSNIPS	Choose tender small to medium parsnips. Remove tops, wash, peel and cut into ½-inch cubes or slices. Blanch, cool and drain. Package, seal and freeze.	2 minutes

VEGETABLE	PREPARATION	BLANCHING TIME (in boiling water unless otherwise stated)
PEAS, green	Pick sweet and tender table-ready peas. Shell, blanch, cool and drain. Package, seal and freeze.	1½ minutes
snow, sugar or Chinese	Choose table-ready, tender pods. Wash, remove blossom ends and strings. Leave whole. Blanch, cool and drain. Package, seal and freeze.	Small pods - 1½-2 minutes Medium pods - 2½-3 minutes
PEPPERS, green or hot	Select tender, crisp peppers. Wash, cut off stems, remove seeds. Cut into rings or slices as desired. Package, seal and freeze.	No heat treatment needed
POTATOES	Wash, peel and cut into ½-inch cubes. Blanch and cool. Package, seal and freeze. For hash browns: cook in jackets until nearly done. Peel, grate and form into desired shape. Freeze. For French fries: peel and cut into strips. Fry in deep fat until light golden brown. Drain, cool. Package and freeze. To serve, heat in 450° oven until golden brown.	5 minutes
PUMPKIN and WINTER SQUASH	Select mature squash or pumpkin. Wash, cut into small pieces and remove seeds. Cook until soft in boiling water, in steam or in 350° oven. Remove pulp from rind. Mash cool, package and freeze.	Cook until tender
SUMMER SQUASH (ZUCCHINI)	Select young tender squash. Wash and cut into ½-inch slices. Blanch, cool and drain. Package, seal and freeze.	3 minutes
ZUCCHINI, grated	Steam in small quantities until translucent. Pack in amounts used in recipes allowing head space. Put containers in cold water to cool. Seal and freeze. Drain before using in baking.	In steam – 1-2 minutes
TOMATOES, juice	Wash, sort and trim tomatoes. Cut in quarters or eighths. Simmer 5-10 minutes. Press through a sieve. Cool. Pour into freezer containers. Leave 1½ inch headspace. Seal and freeze.	
stewed	Wash, scald 1 minute to loosen skin, peel and core. Cut into quarters. Simmer for 15 minutes. Cool. Pack into freezer containers. Leave 1 inch headspace. Seal and freeze.	
	OR:	
raw	Peel and core tomato as above. Cut into quarters or smaller. Put into freezer containers. Press down with wooden spoon to release juice to cover. Leave 1 inch headspace. Seal and freeze.	
TURNIPS	Select small to medium, firm, mild-flavored turnips. Wash, peel and cut into ½-inch cubes. Blanch, cool and drain. Package, seal and freeze.	2 minutes

If you still have unanswered questions about freezing vegetables, contact your county extension office of the NDSU Extension Service. The county office also has circulars on canning and drying foods at home.

For more information on this and other topics, see: www.ag.ndsu.edu

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