



# GREEN & YELLOW BEANS

Michigan-grown green and yellow beans are available July through September.

Green beans and yellow beans are the same in taste and texture and can be substituted for each other in recipes.

## NUTRITION INFORMATION

One-half cup cooked green beans has:

- 22 Calories.
- 0 grams fat.
- 2 grams fiber.

Green and yellow beans are a good source of vitamin C. A food is a good source of a nutrient if a serving provides 10 to 19 percent of the Daily Value for that nutrient.

Nutrient information is based on the USDA nutrient composition database.

## HOW TO BUY



- Choose green or yellow beans with pods of equal size (for even cooking) that are not thicker than a pencil.
- Choose beans with a fresh, vivid color, velvety feel and firm texture. When broken, beans should snap crisply.

■ Avoid beans that are limp, oversized, split, or that have rust spots or scars. If the seeds are bulging in the pod, they are too mature.

## YIELD

1 pound of green or yellow beans equals about:

- 2 cups cooked.
- 3 cups raw, cut up beans.
- 3/4 pound frozen.
- 1 pint canned beans.

9 pounds equal a canner load of 9 pints.

14 pounds equal a canner load of 7 quarts.

1 bushel is about 30 pounds.

## HOW TO STORE

Store green or yellow beans in a plastic bag in the refrigerator. They will stay fresh 3 to 5 days.

## FOOD SAFETY TIPS

Keep beans away from raw meat so that meat juices do not contaminate them.

Wash beans using cool running water before preparing or eating them.

## QUICK AND EASY SERVING TIPS

- Toss cooked beans with a little margarine, butter or low-fat Italian dressing and grated Parmesan cheese, basil, dill, lemon juice, or chopped peanuts or almonds.
- Add blanched green beans to a raw vegetable platter or fresh salad.
- Add beans to stews, chili and soups.
- Add minced onion, garlic or sliced mushrooms that have been sautéed in a little margarine or oil to cooked green or yellow beans.

## HOW TO PREPARE

### To blanch or boil

Wash beans, then snap off ends and break into even-sized pieces. Put water into a saucepan and bring to a boil. There should be enough water to just cover beans. Drop beans into boiling water. Boil, uncovered, for 2 to 3 minutes to blanch or continue boiling until tender, 5 to 10 minutes.

### To steam

Wash beans, then snap off ends and break into even-sized pieces. Bring about 1 inch of water to a boil in a saucepan. Put beans in a single layer into a steamer basket. Put the steamer basket into the saucepan, cover and steam 8 to 12 minutes or until tender.

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### To microwave

Wash 1 pound beans, then snap off ends and break into even-sized pieces. Put beans into 2-quart microwave-safe baking dish with 1/4 cup water. Cover and cook on high for 9 to 13 minutes, stirring twice, or until tender but crisp. Let stand, covered, for 2 minutes.

**Note:** Microwave cooking times are provided as a guide. Cooking times vary due to differences in microwave ovens. Check product often for desired doneness.

### To stir-fry

Wash beans, then snap off ends and break into even-sized pieces. Heat 1 teaspoon oil per cup of beans in a wok or frying pan. Add beans to hot oil and stir 2 to 5 minutes or until tender. Remove from heat. Cover for a minute or so if you prefer softer beans.

## RECIPE

### Italian Vegetable Bake

- 1 (28-ounce) can whole tomatoes
- 1 medium onion, peeled and sliced
- 1/2 pound fresh green beans, washed and broken into even-sized pieces
- 1/2 pound fresh okra, washed and cut into pieces, or half of a frozen 10-ounce package, thawed
- 3/4 cup green pepper, washed, seeds removed and finely chopped
- 2 tablespoons lemon juice
- 1 tablespoon chopped fresh basil or 1/2 teaspoon dried basil, crushed
- 1 1/2 teaspoons fresh oregano leaves or 1/2 teaspoon dried oregano, crushed
- 1 medium zucchini, washed and cut into 1-inch cubes
- 1 medium eggplant, washed, pared and cut into 1-inch cubes
- 2 tablespoons grated Parmesan cheese

Drain and coarsely chop tomatoes. Reserve liquid. Mix together tomatoes and reserved liquid, onion, green beans, okra, green pepper, lemon juice and herbs. Cover and bake at 325 degrees F for 15 minutes. Mix in zucchini and eggplant and continue baking, covered, 60 more minutes or until vegetables are tender. Stir occasionally. Sprinkle top with Parmesan cheese just before serving. Makes 18 (1/2 cup) servings.

This is an official 5 A Day recipe. Official recipes of the 5 A Day program meet specific criteria developed by the Produce for Better Health Foundation in cooperation with the National Cancer Institute.

Nutritional analysis per serving: 34 Calories; 0 grams (g.) fat; 0 milligrams (mg.) cholesterol; 2 g. fiber; 90 mg. sodium.

## HOW TO PRESERVE



### To freeze green or yellow beans

- Select young, tender beans that snap when broken.
- Wash beans and snap off and discard ends. Leave whole, or snap or cut into pieces.

- Blanch small pieces 2 minutes and large pieces 3 minutes.
- Cool quickly in several changes of cold water, and drain well in a colander.
- Pack into airtight freezer containers, leaving 1 inch headspace. Seal, label, date and freeze. Use frozen green or yellow beans within 8 to 12 months for best quality.

Freeze no more than 1 quart (2 to 3 pounds) of food per cubic foot of freezer capacity per day. A cubic foot will hold 30 quarts of food.

### To can green & yellow beans

**Pressure canning:** PRESSURE CANNING IS THE ONLY SAFE METHOD FOR CANNING GREEN OR YELLOW BEANS.

**Prepare beans:** Select young, tender, crisp pods. Remove and discard overmature, diseased and rusty pods. Wash beans and snap off ends. Leave whole or cut or snap into 1-inch pieces.

**Raw pack:** Wash jars. Pack beans tightly into jars, leaving 1 inch headspace. If desired, add 1/2 teaspoon salt to pints, 1 teaspoon to quarts. Fill jars within 1 inch of top with boiling water. Remove air bubbles and wipe jar rims. Place each lid, gasket down, onto the cleaned jar-sealing surface. Then fit metal screw band over the flat lid and follow the manufacturer's guidelines enclosed in or printed on the box for tightening the jar lids properly. Process in pressure canner following the general pressure canner directions and times on page 3.

**Hot pack:** Wash jars. Cover beans with boiling water. Boil 5 minutes. Pack hot beans loosely into hot jars, leaving 1 inch headspace. If desired, add 1/2 teaspoon salt to pints, 1 teaspoon to quarts. Fill jars to within 1 inch of top with boiling cooking liquid. Remove air bubbles and wipe jar rims. Place each lid, gasket down, onto the cleaned jar-sealing surface. Then fit metal screw band over the flat lid and follow the manufacturer's guidelines enclosed in or printed on the box for tightening the jar lids properly. Process in pressure canner following the general pressure canning directions and times on page 3.

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### General pressure canner directions (for a dial-gauge or weighted-gauge canner)

- Put 2 to 3 inches of hot water in the canner. Place filled jars on the rack, using a jar lifter. Fasten canner lid securely.
- Leave weight off vent port or open petcock. Heat at the highest setting until steam flows from the petcock or vent port.
- Maintain high heat setting, exhaust steam 10 minutes, and then place weight on vent port or close petcock. The canner will pressurize during the next 3 to 4 minutes.
- Check the chart for the recommended process time for jar size and altitude. Start timing the process when the pressure reading on the dial gauge indicates that the recommended pressure has been reached, or when the weighted gauge begins to jiggle or rock.
- Regulate heat under the canner to maintain a steady pressure at or slightly above the correct gauge pressure. Quick and large pressure variations during processing may cause unnecessary liquid losses from jars.
- When the timed process is completed, turn off the heat, remove the canner from heat, if possible, and let the canner depressurize. **DO NOT FORCE-COOL THE CANNER.** Standard-size heavy-walled canners require about 30 minutes to cool when loaded with pints and 45 minutes with quarts. Newer thin-walled canners cool more rapidly and are equipped with vent locks. These canners are depressurized when the vent lock piston drops to a normal position.
- After the canner is depressurized, remove the weight from the vent port or open the petcock. Wait 2 minutes, unfasten the lid, and remove it carefully. Open the lid away from you so that the steam does not burn your face.
- Remove jars from canner with a jar lifter and place them on a towel or rack. **DO NOT** retighten screw bands. Air cool jars 12 to 24 hours. Remove screw bands and check lid seals. If the center of the lid is indented, wash, dry, label and store the jar in a clean, cool, dark, dry place. If after 12 to 24 hours the lid is unsealed, examine and replace the jar if defective, use a new lid and a screw band, and **REPROCESS** as before. Dump out beans and liquid into a pan, reheat until boiling, and fill hot jars with beans and liquid, leaving 1 inch headspace. Place **NEW LIDS** and screw bands on jars and process for the time recommended below. When jars have sealed and cooled, remove, wash and store screw bands separately. Beans are highest quality if consumed within a year and safe as long as lids remain vacuum sealed.

### Recommended process times

Yellow and green beans in a dial-gauge pressure canner

Style	Jar of pack size	Process time	Canner pressure (pounds pressure) at altitudes of			
			0-2,000 ft.	2,001-4,000 ft.	4,001-6,000 ft.	6,001-8,300 ft.
Raw	Pints	20 min.	11 lb.	12 lb.	13 lb.	14 lb.
Hot	Pints	20 min.	11 lb.	12 lb.	13 lb.	14 lb.
Raw	Quarts	25 min.	11 lb.	12 lb.	13 lb.	14 lb.
Hot	Quarts	25 min.	11 lb.	12 lb.	13 lb.	14 lb.

### Recommended process times

Yellow and green beans in a weighted-gauge pressure canner

Style of pack	Jar size	Process time	Canner pressure (pounds pressure) at altitudes of	
			0-1,000 ft.	Above 1,000 ft.
Raw	Pints	20 min.	10 lb.	15 lb.
Hot	Pints	20 min.	10 lb.	15 lb.
Raw	Quarts	25 min.	10 lb.	15 lb.
Hot	Quarts	25 min.	10 lb.	15 lb.

## RECIPES

### Pickled Dilled Beans (8 pints)

- 4 pounds fresh, tender green or yellow beans (5 to 6 inches long)
- 8 to 16 heads fresh dill OR substitute 1 teaspoon dried dill seed for each head of fresh dill
- 8 cloves garlic (optional)
- 1/2 cup canning or pickling salt
- 4 cups white vinegar (5% acidity)
- 4 cups water
- 1 teaspoon hot pepper flakes (optional)

**NOTE: ADDING THE AMOUNT OF VINEGAR INDICATED IN THIS RECIPE IS CRUCIAL FOR THE RECIPE TO BE SAFE TO CAN USING A BOILING-WATER CANNER.**

**Wash and sterilize jars.** Wash beans thoroughly; drain. Trim ends and cut into 4-inch lengths. In each hot pint jar, place 1 to 2 dill heads and 1 clove of garlic, if desired. Pack whole beans upright into jars, leaving 1/2 inch headspace. Trim beans to ensure proper fit, if necessary. Combine salt, vinegar, water and pepper flakes (if desired); heat to a boil. Pour boiling liquid over beans, leaving 1/2 inch headspace. Remove air bubbles and wipe jar rims. Place each lid, gasket down, onto the cleaned jar-sealing surface. Then fit metal screw band over the flat lid and follow the manufacturer's guidelines enclosed in or printed on the box for tightening the jar lids properly. Process in boiling-water canner following the general boiling-water canning directions and recommended process times on following page.

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## General boiling-water canner directions

1. Fill the canner halfway with water.
2. Preheat water to 140 degrees F for raw-packed foods and to 180 degrees F for hot-packed foods.
3. Load filled jars, fitted with lids, into the canner rack and use the handles to lower the rack into the water; or fill the canner, one jar at a time, with a jar lifter.
4. Add more boiling water, if needed, so the water level is at least 1 inch above jar tops.
5. Turn heat to its highest position until water boils vigorously.
6. Set a timer for the minutes required for processing the food.
7. Cover with the canner lid and lower the heat setting to maintain a gentle boil throughout the process schedule.
8. Add more boiling water, if needed, to keep the water level above the jars.
9. When jars have been boiled for the recommended time, turn off the heat and remove the canner lid.
10. Using a jar lifter, remove the jars and place them on a towel, leaving at least 1-inch spaces between the jars during cooling.

## Recommended process times

Pickled Dilled Beans, in a boiling-water canner

Style of pack	Jar size	Process times (in minutes) at altitudes of		
		0-1,000 ft.	1,001-6,000 ft.	6,001-8,000 ft.
Raw	Pints	5 min.	10 min.	15 min.

## INFORMATION

For more information on food, food preservation, USDA-tested and approved canning recipes, nutrition or health, see <<http://www.msue.msu.edu>>.

Information in this bulletin is based on the USDA Canning Guide (September 1994), Using and Storing Green Beans (Michigan State University Extension, 1993), E-1883 Food Preservation Series-Green Beans (Michigan State University Extension, 1990) and So Easy to Preserve (University of Georgia Cooperative Extension Service, 1993).



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