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Using, Storing and Preserving Tomatoes
Michigan State University Extension Service
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TOMATOES

AVAILABILITY

August through September

TRIM LOSS

Approximately 18 percent from coring and peeling.

YIELD

12-quart basket	17 to 20 pounds
1 bushel	53 pounds

RECOMMENDED VARIETIES

Campbell 1327, Heinz 1350 and 1370, Ramapo, Big Girl, Big Boy, Lady Luck and Supersonic are good selections for making juice, or crushed or whole tomato products. Roma and San Marzano make excellent paste, sauce or purée.

FREEZING

Juice: Wash, sort and trim firm, vine-ripened tomatoes. Cut in quarters or eighths. Simmer 5 to 10 minutes. Press through a sieve. Pour juice into containers, leaving ½ inch headspace. Seal, label and freeze.

Stewed: Remove stem ends, peel and quarter ripe tomatoes. Cover and cook until tender (10 to 20 minutes). Place the pan containing tomatoes in cold water to cool. Pack into containers, leaving ½ inch headspace. Seal, label and freeze.

CANNING

Select only disease-free, preferably vine-ripened, firm fruits for canning. **CAUTION: DO NOT CAN TOMATOES FROM DEAD OR FROST-KILLED VINES.** Tomatoes from dead or frost-killed vines have decreased acidity and cannot be canned safely. Green tomatoes are more acidic than ripened fruit and can be canned safely with any of the following recommendations.

Acidification: To ensure safe levels of acidity in whole, crushed or juiced tomatoes, add 2 tablespoons of bottled lemon juice or ½ teaspoon of citric acid per quart of tomatoes. For pints, use 1 tablespoon bottled lemon juice or ¼ teaspoon citric acid. Acid can be added directly to the jars before filling them with product. If desired, add sugar, 1 tablespoon at a time, to offset the acid taste. Four tablespoons of 5 percent acidity vinegar may also be used to acidify a quart of whole, crushed or juiced tomatoes, but vinegar may cause undesirable flavor changes.

Tomatoes—Crushed (with no added liquid): This gives a high-quality product ideally suited for use in soups, stews and casseroles. This recipe is similar to one formerly referred to as “Quartered Tomatoes.”

On average, 22 pounds of fresh tomatoes are needed per canner load of 7 quarts, and 14 pounds per canner load of 9 pints. A

bushel yields 17 to 20 quarts of crushed tomatoes (an average of 2¾ pounds per quart).

Wash tomatoes and dip in boiling water for 30 to 60 seconds or until skins split. Then dip in cold water, slip off skins, and remove cores. Trim off any bruised or discolored portions and cut into quarters. Heat one-sixth of the quarters quickly in a large pot, crushing them with a wooden mallet or spoon as they are added to the pot to make them exude juice. Continue heating the tomatoes, stirring to prevent burning. Once the tomatoes are boiling, gradually add remaining quartered tomatoes, stirring constantly. These remaining tomatoes do not need to be crushed—they will soften as the mixture is stirred. Continue until all tomatoes are added. Then boil gently 5 minutes.

Acidify by adding 2 tablespoons of bottled lemon juice or ½ teaspoon of citric acid per quart of tomatoes. For pints, use 1 tablespoon bottled lemon juice or ¼ teaspoon citric acid. Acid can be added directly to the jars before filling with product. If desired, add sugar, 1 tablespoon at a time, to offset the acid taste. Four tablespoons of a

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5 percent acidity vinegar per quart may be used instead of lemon juice or citric acid, but vinegar may cause undesirable flavor changes.

Add 1 teaspoon of salt per quart to the jars, if desired. Fill hot jars immediately with hot tomatoes, leaving ½ inch headspace. Adjust lids and process.

Crushed Tomatoes, in a Boiling-Water Canner

Recommended Process Times

Style of pack	Jar size	Process times (in minutes) at altitudes of			
		0-1,000 ft.	1,001-3,000 ft.	3,001-6,000 ft.	6,001-8,000 ft.
Hot	Pints	35 min.	40 min.	45 min.	50 min.
Hot	Quarts	45	50	55	60

Tomato Juice

On average, 23 pounds of fresh tomatoes are needed per canner load of 7 quarts, and 14 pounds per canner load of 9 pints. A bushel yields 15 to 18 quarts of juice (an average of 3¼ pounds per quart).

Wash, remove stems, and trim off bruised or discolored portions. To prevent juice from separating, quickly cut about 1 pound of fruit into quarters and put directly into a saucepan. Heat immediately to boiling while crushing. Continue to slowly add and crush freshly cut tomato quarters into the boiling mixture. Make sure the mixture boils constantly and vigorously while you add the remaining tomatoes. Simmer 5 minutes after you add all pieces.

If you are not concerned about juice separating after canning, simply slice or quarter tomatoes into a large saucepan. Crush, heat and simmer for 5 minutes before juicing.

Press both types of heated juice through a sieve or food mill to remove skins and seeds. Add 2 tablespoons of bottled lemon juice or ½ teaspoon of citric acid per quart of tomato juice. For pints, use 1 tablespoon of bottled lemon juice or ¼ teaspoon of citric acid. Acid can be added directly to the jars before filling with product. If desired, add sugar, 1 tablespoon at a time, to offset the acid taste. Four tablespoons of a 5 percent acidity vinegar per quart may be used instead of lemon juice or citric acid, but vinegar may cause undesirable flavor changes.

Heat juice again to boiling. Add 1 teaspoon of salt per quart to the jars, if desired. Fill hot jars with hot tomato juice, leaving ½ inch headspace. Adjust lids and process.

Tomato Juice, in a Boiling-Water Canner

Recommended Process Times

Style of pack	Jar size	Process times (in minutes) at altitudes of			
		0-1,000 ft.	1,001-3,000 ft.	3,001-6,000 ft.	6,001-8,000 ft.
Hot	Pints	35 min.	40 min.	45 min.	50 min.
Hot	Quarts	40	45	50	55

Tomato and Vegetable Juice Blend

On average, 22 pounds of tomatoes are needed per canner load of 7 quarts. No more than 3 cups of other vegetables may be added for each 22 pounds of tomatoes.

Wash tomatoes, remove stems, and trim off bruised or discolored portions. To prevent juice from separating, quickly cut about 1 pound of fruit into quarters and put directly into a saucepan. Heat immediately to boiling while crushing. Continue to slowly add and crush freshly cut tomato quarters into the boiling mixture. Make sure the mixture boils constantly and vigorously while you add the remaining tomatoes. Simmer 5 minutes after you add all pieces.

If you are not concerned about juice separating after canning, simply slice or quarter tomatoes into a large saucepan. Crush, heat and simmer for 5 minutes before juicing.

Add no more than 3 cups of any combination of finely chopped celery, onions, carrots and peppers to the tomato juice. Simmer mixture 20 minutes. Press hot cooked tomatoes and vegetables through a sieve or food mill to remove skins and seeds.

Acidify by adding 2 tablespoons of bottled lemon juice or ½ teaspoon citric acid per quart of tomatoes. For pints, use 1 tablespoon bottled lemon juice or ¼ teaspoon citric acid. Acid can be added directly to the jars before filling with product. If desired, add sugar, 1 tablespoon at a time, to offset the acid taste. Four tablespoons of a 5 percent acidity vinegar per quart may be used instead of lemon juice or citric acid, but vinegar may cause undesirable flavor changes.

Add 1 teaspoon of salt per quart to the jars, if desired. Reheat tomato-vegetable juice blend to boiling and immediately fill hot jars, leaving ½ inch headspace. Adjust lids and process.

Tomato-Vegetable Blend, in a Boiling-Water Canner

Recommended Process Times

Style of pack	Jar size	Process times (in minutes) at altitudes of			
		0-1,000 ft.	1,001-3,000 ft.	3,001-6,000 ft.	6,001-8,000 ft.
Hot	Pints	35 min.	40 min.	45 min.	50 min.
Hot	Quarts	40	45	50	55

Standard Tomato Sauce

Quantity and selection: Select only disease-free, vine-ripened, firm fruits for canning.

CAUTION: Do not can tomatoes from dead or frost-killed vines—these tomatoes have decreased acidity and cannot be canned safely.

Thin sauce—On average, 35 pounds of fresh tomatoes are needed per canner load of 7 quarts, and 21 pounds per canner load of 9 pints. A bushel yields 10 to 12 quarts of sauce (an average of 5 pounds per quart).

Thick sauce—On average, 46 pounds are needed per canner load of 7 quarts, and 28 pounds per canner load of 9 pints. A bushel yields 7 to 9 quarts of sauce (an average of 6½ pounds per quart).

Wash, remove stems, and trim off bruised or discolored portions. To prevent juice separating, quickly cut about 1 pound of tomatoes into quarters and put directly into a saucepan. Heat immediately to boiling while crushing. Continue to slowly add and crush freshly cut tomato quarters into the boiling mixture. Make sure the mixture boils constantly and vigorously while you add the remaining tomatoes. Simmer 5 minutes after you add all pieces.

Press heated juice through a sieve or food mill to remove skins and seeds. Simmer in a large-diameter saucepan until sauce reaches the desired consistency. Boil until the volume is reduced by about one-third for thin sauce or by one-half for thick sauce. Add bottled lemon juice or citric acid to jars to ensure acidity. Add 2 tablespoons of bottled lemon juice or ½ teaspoon of citric acid per quart of tomatoes. For pints, use 1 tablespoon of bottled lemon juice or ¼ teaspoon of citric acid. If desired, add sugar, 1 tablespoon at a time, to offset the acid taste. Fill hot jars, leaving ¼ inch headspace. Adjust lids and process.

Tomato Sauce, in a Boiling-Water Canner
Recommended Process Times

Style of pack	Jar size	Process times (in minutes) at altitudes of			
		0-1,000 ft.	1,001-3,000 ft.	3,001-6,000 ft.	Above 6,000 ft.
Hot	Pints	35 min.	40 min.	45 min.	50 min.
Hot	Quarts	40	45	50	55

Chili Salsa (Hot Tomato-Pepper Sauce) (6 to 8 pints)

- 5 pounds tomatoes
- 2 pounds chili peppers
- 1 pound onions, chopped
- 1 cup vinegar (5% acidity)
- 3 teaspoons salt
- ½ teaspoon pepper

CAUTION: TO KEEP HOT PEPPER JUICE OUT OF YOUR EYES, WEAR RUBBER GLOVES WHILE HANDLING CHILI PEPPERS OR WASH HANDS THOROUGHLY WITH SOAP AND WATER BEFORE TOUCHING YOUR FACE.

Wash tomatoes and dip in boiling water for 30 to 60 seconds or until skins split. Dip in cold water, slip off skins and remove cores. Place peppers in oven (400 degrees F) or broiler for 6 to 8 minutes until skins blister. Allow peppers to cool. Place in a pan and cover with a damp cloth. Peel peppers, discard seeds and chop peppers. Coarsely chop tomatoes and combine chopped onions, peppers and remaining ingredients in a large saucepan. Heat to a boil and simmer 10 minutes. Fill hot jars, leaving ½ inch headspace. Adjust lids and process.

Chili Salsa

Recommended Process Times 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.
Hot	Pints	15 min.	20 min.	25 min.

Tomato Ketchup (6 to 7 pints)

- 24 pounds ripe tomatoes
- 3 cups chopped onions
- ¾ teaspoon ground red pepper (cayenne)
- 3 cups cider vinegar (5% acidity)
- 4 teaspoons whole cloves
- 3 sticks cinnamon, crushed
- 1½ teaspoon whole allspice
- 3 tablespoons celery seeds
- 1½ cups sugar
- ¼ cup salt

Wash tomatoes. Dip in boiling water for 30 to 60 seconds or until skins split. Dip in cold water. Slip off skins and remove cores. Quarter tomatoes into a 4-gallon stock pot or a large kettle. Add onions and red pepper. Bring to a boil and simmer 20 minutes, uncovered. Combine spices in a spice bag and add vinegar in a 2-quart saucepan. Bring to a boil. Turn off heat and let stand until tomato mixture has been cooked 20 minutes. Then remove spice bag and combine vinegar and tomato mixture. Boil about 30 minutes. Put the boiled mixture through a food mill or sieve. Return to the pot. Add sugar and salt, boil gently, and stir frequently until volume is reduced by one-half or until mixture rounds up on spoon without separating. Fill hot pint jars, leaving ⅛ inch headspace. Adjust lids and process.

Tomato Ketchup

Recommended Process Times 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.
Hot	Pints	15 min.	20 min.	25 min.

Pickled Green Tomato Relish (about 7 to 9 pints)

10 pounds small, hard, green tomatoes	1 quart water
1½ pounds red bell peppers	4 cups sugar
1½ pounds green bell peppers	1 quart vinegar (5% acidity)
2 pounds onions	⅓ cup prepared yellow mustard
½ cup canning or pickling salt	2 tablespoons cornstarch

Wash and coarsely grate or finely chop tomatoes, peppers and onions. Dissolve salt in water and pour over the vegetables in a large kettle. Heat to boiling and simmer 5 minutes. Drain in a colander. Return vegetables to the kettle. Add sugar, vinegar, mustard and cornstarch and stir to mix. Heat to boiling and simmer 5 minutes. Fill hot, sterile, pint jars with hot relish, leaving ½ inch headspace.

Pickled Green Tomato Relish

Recommended Process Times 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.
Hot	Pints	5 min.	10 min.	15 min.

Tomatoes with Okra or Zucchini (9 pints)

7 pounds tomatoes
2½ pounds okra or zucchini

Wash tomatoes and okra or zucchini. Dip tomatoes in boiling water 30 to 60 seconds or until skins split. Then dip in cold water, slip off skins and remove cores, and quarter. Trim stems from okra and slice into 1-inch pieces or leave whole. Slice or cube zucchini if used. Bring tomatoes to a boil and simmer 10 minutes. Add okra or zucchini and boil gently 5 minutes. Add 1 teaspoon of salt for each quart to the jars, if desired. Fill hot jars with mixture, leaving 1-inch headspace. Adjust lids and process.

Variation: You may add four or five pearl onions or two onion slices to each jar.

Tomatoes with Okra or Zucchini, in a Dial-Gauge Pressure Canner

Recommended Process Times

Style of pack	Jar size	Process time	Canner pressure (PSI) at altitudes of			
			0-2,000 ft.	2,001-4,000 ft.	4,001-6,000 ft.	6,001-8,000 ft.
Hot	Pints	30 min.	11 lb.	12 lb.	13 lb.	14 lb.
Hot	Quarts	35	11	12	13	14

Tomatoes with Okra or Zucchini, in a Weighted-Gauge Pressure Canner

Recommended Process Times

Style of pack	Jar size	Process time	Canner pressure (PSI) at altitudes of	
			0-1,000 ft.	Above 1,000 ft.
Hot	Pints	30 min.	10 lb.	15 lb.
Hot	Quarts	35	10	15

Spaghetti Sauce with Meat (9 pints)

30 pounds tomatoes	4½ teaspoons salt
2½ pounds ground beef or sausage	2 tablespoons oregano
5 cloves garlic, minced	4 tablespoons minced parsley
1 cup chopped onions	2 teaspoons black pepper
1 cup chopped celery or green peppers	¼ cup brown sugar
1 pound fresh mushrooms, sliced (optional)	

Wash tomatoes and dip in boiling water for 30 to 60 seconds or until skins split. Dip in cold water and slip off skins. Remove cores and quarter tomatoes. Boil 20 minutes, uncovered, in large saucepan. Put through food mill or sieve. Sauté beef or sausage until brown. Add garlic, onion, celery or green pepper, and mushrooms, if desired. Cook until vegetables are tender. Combine with tomato pulp in large saucepan. Add spices, salt, and sugar. Bring to a boil. Simmer, uncovered, until thick enough for serving. At this time initial volume will have been reduced by nearly one-half. Stir frequently to avoid burning. Fill hot jars, leaving 1-inch headspace. Adjust lids and process.

Spaghetti Sauce with Meat, in a Dial-Gauge Pressure Canner

Recommended Process Times

Style of pack	Jar size	Process time	Canner pressure (PSI) at altitudes of			
			0-2,000 ft.	2,001-4,000 ft.	4,001-6,000 ft.	6,001-8,000 ft.
Hot	Pints	60 min.	11 lb.	12 lb.	13 lb.	14 lb.
Hot	Quarts	70	11	12	13	14

Spaghetti Sauce with Meat, in a Weighted-Gauge Pressure Canner

Recommended Process Times

Style of pack	Jar size	Process time	Canner pressure (PSI) at altitudes of	
			0-1,000 ft.	Above 1,000 ft.
Hot	Pints	60 min.	10 lb.	15 lb.
Hot	Quarts	70	10	15

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