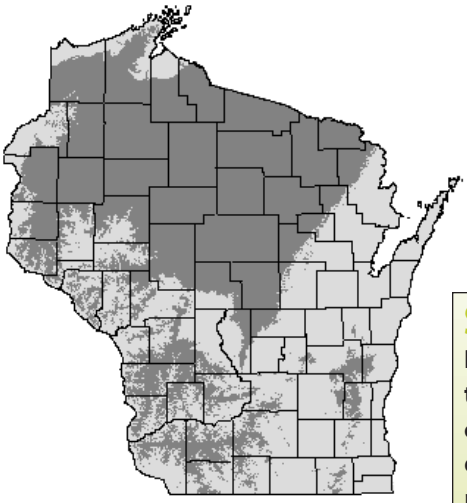
B3570

University of Wisconsin-Extension Cooperative Extension

Wisconsin Safe Food Preservation Series

Canning Salsa Safely

Barbara H. Ingham



State elevation map

Remember to adjust for elevation above sea level when canning salsa. To determine your elevation, consult the elevation map on this page, or call your county Land Information office (listed under county government in your phone book). If you share recipes with friends and relatives, be sure to include adjustments for changes in elevation.

Elevation above 1,000 feet

Elevation below 1,000 feet

Salsa can be a fun and easy way to preserve peak-of-season tomatoes to enjoy all year.

Most salsa recipes mix **low-acid foods**, such as onions and peppers, with **acid foods**, such as tomatoes. The salsa recipes in this bulletin have been tested to ensure that they contain enough acid to be processed safely in a boiling water canner.

Ingredients

Tomatoes

Use only high quality tomatoes for canning salsa or any other tomato product. Canning is no way to use overripe or damaged tomatoes, nor tomatoes from dead or frost-killed vines. Poor quality or overripe tomatoes will yield a very poor salsa that may spoil and be unsafe.

The type of tomato you use affects salsa quality. **Paste or Italian tomatoes**, such as Roma VF, Debaro, Italian Gold, Sheriff, or Viva Italia, have firmer flesh and produce thicker salsas than large **slicing tomatoes**, such as Celebrity, Big Boy, Better Boy, or Husky Gold (yellow).*

Although both types make good salsas, slicing tomatoes usually yield a thinner, more watery salsa than paste tomatoes. You can thicken these salsas by adding tomato paste or by draining off some of the liquid after you chop the tomatoes. But use the quantity of chopped tomatoes listed in the recipe.

Where recipes call for peeled tomatoes, remove the skin by dipping tomatoes in boiling water for 30 to 60 seconds or until skins split. Dip in cold water, then slip off skins and remove cores and seeds.

You may substitute green tomatoes or tomatillos for tomatoes in any of these recipes.

Tomatillos

Tomatillos are also known as **Mexican husk tomatoes**. You do not need to peel or seed these, but you must remove the dry outer husk. Varieties suitable for Wisconsin gardens include Purple and TomaVerde.*

***For a complete list of recommended vegetables to plant, request the publication *Growing Tomatoes, Peppers and Eggplants in Wisconsin* (A3687). This is available from your county UW-Extension office or order from Cooperative Extension Publishing (learningstore.uwex.edu).**

Acids

Salsa is preserved by adding **acid**, in the form of commercially bottled vinegar, lemon juice, or lime juice. Use only vinegar that is at least 5% acidity and only bottled lemon or lime juice (never freshly squeezed). Do not use homemade vinegar as the level of acidity can vary.

You **must** add acid to canned salsas and the amounts of vinegar or lemon juice in the recipes can not be reduced for safe boiling water canning. Sugar can be added to offset the tartness of the acid. **An equal amount of bottled lemon juice may be substituted for vinegar in recipes, but do not substitute vinegar for lemon juice; an unsafe product may result.**

***For a complete list of recommended vegetables to plant, request the publication *Growing Tomatoes, Peppers and Eggplants in Wisconsin* (A3687). This is available from your county UW-Extension office or order from Cooperative Extension Publishing (see back cover).**

Peppers

Use only high quality peppers. **Do not increase** the total amount of peppers in any recipe. But you may substitute one type of pepper for another or use canned chilies in place of fresh.

Peppers range from mild to fiery in taste. Mild peppers are usually big — 4 to 10 inches long. **Mild pepper** varieties that grow in Wisconsin are bell-types such as NorthStar, Big Bertha, Early Cal Wonder, Yankee Bell or Gypsy (yellow), and others.* Choose a mild pepper when the recipe calls for long green chilies, or substitute bell peppers for some or all. For descriptions of various peppers used in salsa, see the chart on page 4.

There are many different types of peppers grown in the United States. Peppers can be classified based on their relative hotness. The Scoville heat unit (SHU) is a measure of pepper pungency. The chemical substance that makes some peppers hot is capsaicin. Pure capsaicin is approximately 16,000,000 Scoville units.

Habañero type peppers are the hottest with up to 300,000 Scoville units. The units will vary for each type of pepper based on variety, maturity, and whether the pepper is fresh or dried. Typically, pungent peppers require hot, dry conditions to fully develop their flavor and may not produce a suitable harvest in cool, wet summers.

Very hot peppers are usually small — 1 to 3 inches long — except for Hungarian Yellow Wax. They provide a distinct taste to salsas. Jalapeño is the most popular. Other varieties that grow in Wisconsin include: Super Cayenne, Super Chili, Habañero, Anaheim College, and Ancho 101.* Hot peppers usually need longer growing seasons than mild varieties, and thus do best in the southern half of the state.

Hot peppers such as jalapeño do not need to be peeled, but seeds are often removed. Finely chopped mild peppers do not usually need to be skinned.

If you want to remove the tough skin from peppers, such as long, green chilies, first slit each pepper along the side to allow steam to escape when you heat them. Next, peel using one of these two methods:

- **Oven or broiler** — Place peppers in a hot oven (400° F) or broiler for 6 to 8 minutes until skins blister.
- **Range top** — Cover hot gas or electric burner with heavy wire mesh. Place peppers over the burner for several minutes until skins blister.

After heating, place peppers in a pan and cover with a damp towel. Allow to steam for 5 to 10 minutes. Slip off skins, discard seeds, and chop.

Pepper quantity guide

Use the following chart to guide you in mixing different peppers. The hotness of salsa depends on the kind and amount of peppers used. For a very mild salsa, substitute bell peppers for hot peppers. The mix of peppers can be varied as long as the total amount stays the same.

Remember: Always measure the amount of chopped pepper listed in the recipe. Do not rely on this chart for exact quantities.

Amount whole	Amount chopped
Bell pepper, 1 medium	About 1 cup chopped
Bell pepper, 1 large	About 2 cups chopped
Jalapeño, 1 medium	About 1/4 cup chopped
Long green chili, 1 pepper	About 1/3 cup chopped

When substituting canned peppers for fresh, first drain the canned peppers, then chop and measure the desired amount.

Descriptions of various pepper types used in salsa (ordered by heat)

Type	Size	Shape	Color at maturity	Scoville heat units
Bell	3–4" W x 4" L	blocky bell	red, yellow, orange, brown	0
Cherry	1-1 1/2" in diameter	round	red	100-500
Poblano	2-3" W x 3-6" L	elongated	almost black	1,000-1,500
Jalapeño	1" W x 3" L	blunt and tapered	red	2,500–5,000
Serrano	1/2" W x 1–4" L	tapered	green or red	10,000–20,000
Cayenne	1" W x 10" L	thin and tapered, slightly curved	red	30,000–50,000
Habañero	1–2" W x 1–2" L	irregularly spherical	orange	150,000–300,000

Caution: **The volatile oils in hot peppers can cause burns. Wear disposable gloves when you cut or chop these peppers. Do not touch your face, particularly near your eyes. Wash hands thoroughly with soap and water after cutting or chopping hot peppers or removing gloves.**

Yield Information

1 bushel fresh tomatoes = 53 lbs.

1 quart fresh tomatoes = 3 lbs.

1 cup fresh tomatoes = ¾ lb.

1 bushel bell peppers = 25 lbs.

Onions

Red, yellow, or white onions may be substituted for each other. **Do not increase the total amount of onions in any recipe.**

Spices and herbs

Spices and herbs add characteristic flavors to salsas. The amount of **dried spices and herbs** (black pepper, salt, dried oregano leaves, and ground cumin) in the recipes in this publication may be altered or left out. **Do not** increase the amount of fresh **herbs** or **garlic**, however. Fresh herbs will lose flavor during heat processing. For a stronger, fresher flavor, add fresh herbs such as cilantro just before serving.

Canning safely

For safe canning:

- **Follow these research-tested recipes carefully.** This bulletin provides recipes for safely processing **pint jars** of salsa. **Safe processing times are not available for quart jars.**
- **If you use any other recipe or adapt one of these:** Freeze the salsa or refrigerate it and use within several weeks.
- **If you want thicker salsas:**

  Before canning — Add commercial tomato paste to thicken before canning. **Do not** thicken salsas with flour or cornstarch.

  After canning — After you open a jar, you may pour off some liquid or thicken the salsa with cornstarch before serving.

Filling jars

Follow the manufacturer's directions for pre-treating two-piece vacuum seal lids. Fill hot, clean pint jars with hot salsa, leaving 1/2 inch headspace. Remove air bubbles and adjust headspace if needed. Wipe jar rims with a clean, damp paper towel. Put on pre-treated lids and screw on metal bands until you begin to feel resistance, then turn the band until it is firmly tightened.

Processing in a boiling water canner

- Use a rack to keep jars from touching the canner bottom and to allow heat to reach all sides of the filled pint jars.
- Put jars into a canner that contains simmering (180° F) water.
- Add boiling water if needed to bring water 1 to 2 inches above jar tops. Do not pour water directly on the jars. Place a tight-fitting cover on the canner. If you use a pressure canner for boiling water canning, leave the cover unfastened and the petcock open to prevent pressure buildup.
- Bring water to a rolling boil. Once the water is actively boiling, set a timer fowater to a rolling boil. Once
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Tomato salsa — using slicing tomatoes

4 cups slicing tomatoes, peeled, cored, and chopped

2 cups green chilies, peeled, seeded, and chopped

1/2 cup jalapeño peppers, seeded and finely chopped (2 whole)

3/4 cup onions, chopped (1 medium)

4 cloves garlic, finely chopped

2 cups vinegar (5% acetic acid)

1 tsp. ground cumin (optional)

2 tbsp. oregano leaves (optional)

1 tbsp. fresh cilantro (optional)

Yield: 4 to 6 pints

Jalapeño peppers do not need to be peeled. Peel and prepare chili peppers as described on page 3, if desired. To peel tomatoes, dip in boiling water for 30 to 60 seconds or until skins split, then dip in cold water and remove skins. Core and chop tomatoes.

Combine all ingredients in a large pot and bring to a boil, stirring frequently. Reduce heat and simmer 20 minutes, stirring occasionally. Ladle hot salsa into clean, hot pint jars, leaving 1/2 inch headspace. Remove air bubbles and adjust headspace if needed. Wipe jar rims and cap with properly pre-treated lids. Process in a boiling water canner. (See state elevation map on inside front cover to determine processing time.)

Process time in a boiling water canner for hot pack pint jars at the following elevations:

0-1,000 feet	15 minutes
1,001-6,000 feet	20 minutes

Tomato salsa — using paste tomatoes

7 quarts paste tomatoes, peeled, cored, and chopped

4 cups long green chilies, peeled, seeded, and chopped (12 whole)

5 cups onion, chopped (5 medium)

1/2 cup jalapeño peppers, seeded and finely chopped (2 whole)

6 cloves garlic, minced

2 cups bottled lemon or lime juice

2 tbsp. salt

1/2 tbsp. red pepper

2 tbsp. ground cumin (optional)

3 tbsp. oregano leaves (optional)

2 tbsp. fresh cilantro (optional)

Yield: 12 to 16 pints

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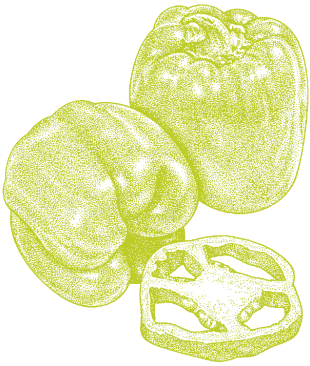

Jalapeño peppers do not need to be peeled. Peel and prepare chili peppers as described on page 3, if desired. To peel tomatoes, dip in boiling water for 30 to 60 seconds or until skins split, then dip in cold water and remove skins. Core and chop tomatoes.

Combine all ingredients except cumin, oregano, and cilantro in a large saucepan and heat, stirring frequently, until mixture boils. Reduce heat and simmer for 10 minutes. Add spices and simmer for another 20 minutes, stirring occasionally. Ladle hot salsa into clean, hot pint jars, leaving 1/2 inch headspace. Remove air bubbles and adjust headspace if needed. Wipe jar rims and cap with properly pre-treated lids. Process in a boiling water canner. (See state elevation map on inside front cover to determine processing time.)

Process time in a boiling water canner for hot pack pint jars at the following elevations:

0-1,000 feet	15 minutes
1,001-6,000 feet	20 minutes

Caution: **The volatile oils in hot peppers can cause burns. Wear disposable gloves when you cut or chop these peppers. Do not touch your face, particularly near your eyes. Wash hands thoroughly with soap and water after cutting or chopping peppers or after removing gloves.**

Tomatillo green salsa

5 cups tomatillos or green tomatoes, chopped

1 1/2 cups long green chilies, peeled, seeded, and chopped (3 chilies)

1/2 cup jalapeño peppers, seeded and finely chopped (2 peppers)

4 cups onions, chopped (2 medium)

1 cup bottled lemon juice

6 cloves garlic, minced

1 tbsp. ground cumin (optional)

2 tbsp. dried cilantro (optional)

1 tbsp. salt

1 tsp. red pepper

Yield: 5 pints

Jalapeño peppers do not need to be peeled. Peel and prepare chili peppers as described on page 3, if desired. Chop tomatillos or green tomatoes.

Combine all ingredients in a large saucepan and heat, stirring frequently, until mixture boils. Reduce heat and simmer for 20 minutes, stirring occasionally. Ladle hot salsa into clean, hot pint jars, leaving 1/2 inch headspace. Remove air bubbles and adjust headspace if needed. Wipe jar rims and cap with properly pre-treated lids. Process in a boiling water canner. (See state elevation map on inside front cover to determine processing time.)

Process time in a boiling water canner for hot pack pint jars at the following elevations:

0-1,000 feet	15 minutes
1,001-6,000 feet	20 minutes

Hot pepper salsa I

(hot tomato pepper sauce)

5 lbs. tomatoes

2 lbs. chili peppers

1 lb. onions

1 cup vinegar (5% acetic acid)

3 tsp. salt

1/2 tsp. pepper

Yield: 6 to 8 pints

Use a mixture of hot and mild peppers, if desired. Jalapeño peppers and mild green peppers do not need to be peeled. Peel and prepare chili peppers as described on page 3, if desired. To peel tomatoes, dip in boiling water for 30 to 60 seconds or until skins split, then dip in cold water and remove skins. Core and chop tomatoes. Combine tomatoes with chopped peppers, onions, and remaining ingredients in a saucepan. Heat to boiling, reduce heat and simmer 10 minutes, stirring occasionally. Ladle hot salsa into clean, hot pint jars, leaving 1/2 inch headspace. Remove air bubbles and adjust headspace if needed. Wipe jar rims and cap with properly pre-treated lids. Process in a boiling water canner. (See state elevation map on inside front cover or refer to the last paragraph of the following recipe to determine processing time.)

Process time in a boiling water canner for hot pack pint jars at the following elevations:

0-1,000 feet	15 minutes
1,001-6,000 feet	20 minutes

Hot pepper salsa II—

10 cups tomatoes, peeled, cored, and chopped

6 cups chili peppers, peeled, seeded, and chopped

4 cups onion, chopped

1 cup cider vinegar (5% acetic acid)

1 tbsp. salt

1 tsp. cumin (optional)

Yield: 6 to 8 pints

Use a mixture of hot and mild peppers, if desired. Jalapeño peppers and mild green peppers do not need to be peeled. Peel and prepare chili peppers as described on page 3, if desired. To peel tomatoes, dip in boiling water for 30 to 60 seconds or until skins split, then dip in cold water and remove skins. Core and chop tomatoes.

Combine all ingredients in a large pot and bring to a boil, stirring frequently. Reduce heat and simmer 10 minutes, stirring occasionally. Ladle hot salsa into clean, hot pint jars, leaving 1/2 inch headspace. Remove air bubbles and adjust headspace if needed. Wipe jar rims and cap with properly pre-treated lids. Process in a boiling water canner. (See state elevation map on inside front cover to determine processing time.)

Process time in a boiling water canner for hot pack pint jars at the following elevations:

0-1,000 feet	15 minutes
1,001-6,000 feet	20 minutes

Tomato and green chili salsa

3 cups tomatoes, peeled, cored, and chopped

3 cups long green chilies, peeled, seeded, and chopped

3/4 cup onions, chopped

1 jalapeño pepper, seeded and finely chopped

6 cloves garlic, finely chopped

1 1/2 cups vinegar (5% acetic acid)

1/2 tsp. ground cumin (optional)

2 tsp. oregano leaves (optional)

1 1/2 tsp. salt

Yield: 3 to 5 pints

Caution: **The volatile oils in hot peppers can cause burns. Wear disposable gloves when you cut or chop these peppers. Do not touch your face, particularly near your eyes. Wash hands thoroughly with soap and water after cutting or chopping peppers or after removing gloves.**

Use a mixture of hot and mild peppers, if desired. Jalapeño peppers do not need to be peeled. Peel and prepare chili peppers as described on page 3, if desired. To peel tomatoes, dip in boiling water for 30 to 60 seconds or until skins split, then dip in cold water and remove skins. Core and chop tomatoes.

Combine all ingredients in a large pot and bring to a boil, stirring frequently. Reduce heat and simmer 20 minutes, stirring occasionally. Ladle hot salsa into clean, hot pint jars, leaving 1/2 inch headspace. Remove air bubbles and adjust headspace if needed. Wipe jar rims and cap with properly pre-treated lids. Process in a boiling water canner. (See state elevation map on inside front cover to determine processing time.)

Process time in a boiling water canner for hot pack pint jars at the following elevations:

0-1,000 feet	15 minutes
1,001-6,000 feet	20 minutes

Salsa recipes are available in Spanish from the National Center for Home Food Preservation (www.uga.edu/nchfp/how/can_salsa.html).

Spicy cranberry salsa

6 cups red onion, chopped

4 large Serrano peppers, finely chopped

1 1/2 cups water

1 1/2 cups cider vinegar (5% acetic acid)

1 tbsp. salt

1 1/3 cups sugar

6 tbsp. clover honey

12 cups fresh whole cranberries, rinsed (2 3/4 lbs.)

Yield: 6 pints

Combine all ingredients except cranberries in a large pot and bring to a boil over high heat, stirring frequently. Reduce heat and boil gently for 5 minutes. Add cranberries, reduce heat slightly and simmer mixture for simmer 20 minutes, stirring occasionally.

Ladle hot salsa into clean, hot pint or half-pint jars, leaving 1/4 inch headspace. Remove air bubbles and adjust headspace if needed. Wipe jar rims and cap with properly pre-treated lids. Process in a boiling water canner. (See state elevation map on inside front cover to determine processing time.)

Process time in a boiling water canner for hot pack pint jars at the following elevations:

0-1,000 feet	15 minutes
1,001-6,000 feet	20 minutes

Fruit salsas are a nice accompaniment to roasted meats, or to add variety to any meal. Use these research-tested recipes to prepare safe, high quality fruit salsas for your family or friends.

Peach apple salsa

6 cups Roma tomatoes, chopped (3 lbs. whole)

2 1/2 cups yellow onions, diced (2 large whole)

2 cups green bell peppers, chopped (1 1/2 large whole)

10 cups unripe peaches, chopped (4 1/2 lbs. whole)

2 cups Granny Smith apples, chopped (2 large whole)

4 tbsp. mixed pickling spice

1 tbsp. canning salt

2 tsp. crushed red pepper flakes

3 3/4 cups packed light brown sugar

2 1/4 cups cider vinegar (5% acetic acid)

Yield: 6 to 8 pints

To peel tomatoes, dip in boiling water for 30 to 60 seconds or until skins split. Then dip in cool water and remove skins. Chop into 1/2-inch pieces. Peel, wash, and dice onions into 1/4-inch pieces. Wash, core, and seed bell peppers; chop into 1/4-inch pieces. Combine chopped tomatoes, onions, and peppers in an 8- or 10-quart Dutch oven or saucepot.

To prevent browning of peaches and apples, prepare an ascorbic acid (vitamin C) solution by crushing 3 500-mg tablets of vitamin C and placing in one-half gallon of water. Freshen every 30 minutes. Wash, peel, and pit peaches; cut into halves and soak for 10 minutes in an ascorbic acid solution. Drain. Wash, peel, and core apples; cut into halves and soak for 10 minutes in ascorbic acid solution.

continued on next page

Drain. Quickly chop peaches and apples into 1/2-inch cubes to prevent browning. Add chopped peaches and apples to the saucepot with the vegetables.

Place pickling spices in a muslin square and tie ends to make a spice bag. Add the pickling spice bag to the saucepot; stir in the salt, red pepper flakes, brown sugar, and vinegar. Bring to boiling, stirring gently to mix ingredients. Reduce heat and simmer 30 minutes, stirring occasionally. Remove spice bag from pan and discard.

With a slotted spoon, fill salsa solids into hot, clean pint jars, leaving 1 1/4 inch headspace. Cover with cooking liquid, leaving 1/2 inch headspace.

Remove air bubbles and adjust headspace if needed. Wipe jar rims and cap with properly pre-treated lids. Process in a boiling water canner. (See state elevation map on inside front cover to determine processing time.)

Process time in a boiling water canner for hot pack pint jars at the following elevations:

0-1,000 feet	15 minutes
1,001-6,000 feet	20 minutes

Caution: Handling green mangoes may irritate the skin of some people in the same way as poison ivy. Wear disposable gloves while working with raw green mango. Do not touch your face, lips, or eyes after touching or cutting raw green mangoes until all traces are washed away.

Mango salsa

6 cups unripe mango, diced (3-4 large whole)

1 1/2 cups red bell pepper, diced

1/2 cup yellow onion, finely chopped

1/2 tsp. red pepper flakes, crushed

2 tsp. garlic, finely chopped

2 tsp. ginger, finely chopped

1 cup light brown sugar

1 1/4 cups cider vinegar (5% acetic acid)

1/2 cup water

Yield: 6 **half-pints**

Wash all produce well. Peel and chop mango into 1/2-inch cubes. Dice bell pepper into 1/2-inch pieces. Finely chop yellow onions.

Combine all ingredients in a large pot and bring to a boil, stirring frequently. Reduce heat and simmer 5 minutes, stirring occasionally. Ladle hot salsa into clean, hot **half-pint** jars, leaving 1/4 inch headspace. Remove air bubbles and adjust headspace if needed. Wipe jar rims and cap with properly pre-treated lids. Process in a boiling water canner. (See state elevation map on inside front cover to determine processing time.)

Process time in a boiling water canner for hot pack half-pint jars at the following elevations:

0-1,000 feet	10 minutes
1,001-6,000 feet	15 minutes

Wisconsin Safe Food Preservation Series

Canning Fruits Safely (B0430)

*Canning Meat, Wild Game, Poultry and Fish Safely (*B3345)

Canning Salsa Safely (B3570)

Canning Vegetables Safely (B1159)

Freezing Fruits and Vegetables (B3278)

Homemade Pickles and Relishes (B2267)

*Making Jams, Jellies and Fruit Preserves (*B2909)

Tomatoes Tart & Tasty (B2605)

Using and Caring for a Pressure Canner (B2593)

Wisconsin's Wild Game: Enjoying the Harvest (B3573) and *Guidelines for Making Safe Jerky at Home* (SUPL3573)

To start with the right ingredients, see also:

Growing Tomatoes, Peppers and Eggplants in Wisconsin (A3687)

Harvesting Vegetables from the Home Garden (A2727)

These are available from your county UW-Extension office or order from Cooperative Extension Publishing (see back cover).

USDA Complete Guide to Home Canning (Ag Information Bulletin 539, 1994) is online via the **National Center for Home Food Preservation:** www.uga.edu/nchfp/publications/publications_usda.html.

You can also find these research-tested recipes and more from the National Center for Home Food Preservation (www.uga.edu/nchfp/publications/nchfp/factsheets.html):

Easy Hot Sauce

Cayenne Pepper Sauce

Cranberry Orange Chutney

Mango Chutney

Chayote and Pear Relish

Spicy Jicama Relish

Tangy Tomatillo Relish

Note: Adjust process times for Wisconsin elevations.

Acknowledgments: Adapted and revised with permission from S*alsa Recipes for Canning* PNW395, by Val Hillers and Richard Dougherty, Washington State University (Pullman, Wash.: Pacific Northwest Extension Publications), 1996. Other recipes adapted from the National Center for Home Food Preservation, University of Georgia

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Author: Barbara H. Ingham, professor and food science extension specialist, College of Agricultural and Life Sciences, University of Wisconsin-Madison and UW–Extension.

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