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This publication is issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Noelle Cockett, Vice President for Extension and Agriculture, Utah State University.
Organisms that cause food spoilage - molds, yeasts and bacteria - are always present in the air, water and soil. Enzymes that may cause undesirable changes in flavor, color and texture are present in raw fruits. When tomatoes are canned, they are heated hot enough and long enough to destroy spoilage organisms. This heating (or processing) also stops the action of enzymes.

**Safe Procedures Needed**

Processing times are scientifically determined. Therefore it is extremely important to always follow a **tested** recipe (USDA or Ball Book). Changes in the amount or type of ingredients and method of preparation can influence the processing conditions needed to guarantee safety.

*Products that are not prepared according to instructions should be frozen.*

**Selecting Equipment**

**Boiling Water-Bath:** Any big metal container may be used as a **boiling-water-bath canner** if it is deep enough so the water can cover the jars by at least one inch and still have ample room for boiling (two or four inches above jar tops - see illustration). The canner must have a tight-fitting cover and metal rack. A **Pressure Canner** may be used for a **Boiling Water Bath**, provided it is deep enough. Do not fasten the cover; leave the petcock open so steam can escape and pressure does not build up in the canner.

**Pressure Canner:** It is a specially made heavy pot that has a lid that can be closed steam-tight. It must have a rack in the bottom, a tight-fitting cover, exhaust vent (or petcock), safety valve and an accurate pressure gauge.

- The pressure gauge may be a **weighted gauge** that fits over the vent or a **dial gauge** on which a needle indicates the pressure inside the canner. Newer canners may also have an extra cover lock as an added safety feature. Canning jars specifically designed for home canning are best.

- Commercial food jars such as many mayonnaise jars break easily and may **not seal**. Use only the half-pint, pint or quart sizes for tomatoes. Jars should be checked closely for cracks or chips.

- Two-piece metal canning lids can be used only **once**, but the screw bands can be reused as long as they are in good condition. Do not reuse lids from commercially canned foods for home canning.

Jars processed in a **Boiling Water Bath** for 10 minutes or more, or in a **pressure canner**, will be **sterilized** during processing and do not need prior sterilization. **They DO need to be washed in hot, soapy water, rinsed and kept hot until filled and placed in the canner.**
Preparing Tomatoes

Select disease-free, preferably vine ripened, firm tomatoes for canning. Do not can tomatoes from dead or frost-killed vines. Wash all tomatoes thoroughly. To quickly peel tomatoes, dip them in boiling water for 30 to 60 seconds or until skins split. Then dip in cold water, slip off skins and remove cores.

<table>
<thead>
<tr>
<th>Amount Needed per Quart:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
</tr>
<tr>
<td>----------------------------------</td>
</tr>
<tr>
<td>Crushed tomatoes</td>
</tr>
<tr>
<td>Whole or halved tomatoes</td>
</tr>
<tr>
<td>Tomato juice</td>
</tr>
<tr>
<td>Tomato sauce</td>
</tr>
</tbody>
</table>

*Freezing is a safe, easy alternative to home canning. Frozen tomatoes and tomato products do not need added acid.

Filling Jars

Tomatoes may be packed raw into jars or they may be preheated and packed hot. Read the directions for each tomato product to determine which method may be used. If given a choice, the hot pack produces a higher quality product. Remember, keep jars hot to prevent breakage as they are filled.

Adding Salt

Salt is added to tomatoes for flavor, not to preserve them. Therefore, it may be omitted. If using salt, add ½ teaspoon to each pint or 1 teaspoon to each quart.

Processing Tomatoes

Raw Pack: Put raw tomatoes into jars and cover with boiling water. Raw tomatoes should be packed firmly into the jars to avoid shrinkage.

Hot Pack: Slowly simmer tomatoes for five minutes (don’t add water); pack hot into jars. Then cover with the boiling cooking liquid or juice drawn from the tomatoes. For either pack, use enough liquid to fill around the solid food in the jar and to cover the food*

Adding salt is optional. Remove any trapped air bubbles (slide spatula between food and sides of the jar). Add more liquid if necessary to obtain the proper headspace. Wipe the jar rim with a clean damp cloth to remove any food particles. Place a clean canning lid on the jar. Screw the metal screw band down fingertip tight.

Acidify for Safety

Because tomatoes may be borderline in the amount of acid they contain, some precautions are needed to preserve them safely. (See Chart below)

<table>
<thead>
<tr>
<th>Product</th>
<th>Pint</th>
<th>Quart</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottled lemon juice</td>
<td>1 tablespoon</td>
<td>2 tablespoons</td>
</tr>
<tr>
<td>Citric acid</td>
<td>¼ teaspoon</td>
<td>½ teaspoon</td>
</tr>
</tbody>
</table>

**Note: May substitute 4 T/quart or 2 T/pint of vinegar for lemon juice or citric acid. Vinegar may cause undesirable flavor changes.

Equivalents

- 3-4 small tomatoes = 2 ¼ cups chopped (1 lb)
- 53 lbs = 1 bushel = 15-18 quarts tomato juice
- 10 lg chile peppers = 3 cups chopped (1 lb)
- 2 ½ cups chopped onions (1 lb)
- 6 ½ cups sliced mushrooms (1 pound)
Read the manufacturer's instructions and the following general instructions.

- Place 2-3 inches of hot but not boiling water in canner if you are canning raw pack foods. For hot pack foods, the water should be at a simmer.
- Place the jars of food on the rack in the canner so steam can flow around each jar; fasten lid.
- **Venting is a very important step!** Turn heat to high and watch until steam begins to escape from vent (petcock). Let the air escape steadily for 10 minutes - this will remove air from canner; close vent. *Even “self exhausting” canners need to go through this venting process.*
- **Dial Gauge Canner** - let the pressure rise quickly to 8# pressure. Adjust the burner temperature down slightly and let the pressure continue to rise to the correct pressure (12 ½ # in Ogden). Start counting the processing time as soon as the pressure is reached.
- **Weighted Gauge Canner** - let the canner heat quickly at first; reduce heat slightly until weight begins to rock gently or "jiggle" (2-3 times per minute). Start processing time.
- Keep the pressure constant by regulating the heat under the canner. Do **not** lower the pressure by opening the vent or lifting the weight. Keep drafts from blowing on the canner.
- When processing time is completed, carefully remove the canner from the heat.
- Let the pressure in the canner drop to zero. This will take 30 to 45 minutes/16-quart canner; 1 hour/22-quart canner. Do **not** rush the cooling by setting the canner in water, by running cold water over the canner, or opening the vent.
- When the gauge on a dial gauge canner registers zero or when a gentle nudge to the weight on a weighted gauge canner does not produce steam or resistance, wait two minutes, and then open the vent or remove the weight. Wait two more minutes and then open the canner. Tilt lid so the steam escapes away from you. Do not leave the food inside where it could begin to spoil.
- Carefully remove jars; place hot jars on a rack, dry towels, boards or newspapers.
- Allow jars to cool untouched, away from drafts. Do not be alarmed at popping sounds as the jars cool and seal.

### PRESSURE CANNING TIMES *(Altitude of 4,001-6,000 ft)*

**Hot Pack for Pints and/or Quarts**

<table>
<thead>
<tr>
<th>Item</th>
<th>20 minutes at 8 lbs</th>
<th>15 minutes at 13 lbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomatoes, Crushed (No added liquid)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whole or Halved (Raw without added liquid)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whole or Halved (Packed in water)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whole Tomatoes (Packed in tomato juice)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tomato Juice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tomato-Vegetable Blend</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tomato Sauce</td>
<td></td>
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</tr>
</tbody>
</table>
**Boiling Water Bath Processing**

- Put filled jars on a rack in the canner. For raw pack, have water hot but not simmering; for hot pack have water simmering.
- Add boiling water if needed to bring water an inch or two over tops of jars; don’t pour boiling water directly on glass jars. Cover with lid.
- When the water in the canner comes to a rolling boil, start to count processing time. Boil gently and steadily for the time recommended.
- Remove jars from the canner immediately when the processing time is up. Place them on a rack, dry towels, boards or newspapers (avoid cold surface). Allow the jars to cool untouched, away from drafts.

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**Day-After-Canning**

Test the seal on the jar lids. Press flat metal lids at the center. They should be slightly concave and should not move. Screw bands may be removed from thoroughly cooled jars. Label sealed jars with content and date. Store the canned food in a cool, dry place. Stored properly, canned fruits should retain their high quality for about one year.

- Treat unsealed jars of food as fresh. The food can be eaten immediately, refrigerated, frozen or re-processed.
- If food needs to be reprocessed, the whole process must be repeated within 24 hours of initial processing.
- If more than 24 hours have passed when an unsealed jar is discovered, examine it for spoilage. Do Not Taste! If the food appears to be edible, boil for 15 minutes, freeze, or refrigerate. It is not safe to reprocess at this point.

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**On Guard Against Spoilage**

Do not taste or use canned tomatoes or tomato products that show any signs of spoilage! Look closely at all jars before opening them.

- A bulging lid or leaking jar are signs of spoilage. When you open the jar, look for other signs such as spurting liquid, an off odor, or mold.
- All spoiled canned tomatoes should be discarded in a place where they will not be eaten by humans or pets.
- Tomato products that contain vegetables or meats that are improperly processed or that have spoiled can contain botulism toxin.
- They should be detoxified before being discarded. To detoxify these products, carefully remove the lid from the jar. Place the jar(s) of food and its lid(s) in a saucepan. Add enough hot water to cover the jar(s); boil for 30 minutes and then cool. Drain water and dispose of food and lid. *Jar may be reused.*
- Surfaces that come in contact with spoiled or questionable tomato mixtures should be cleaned with a solution of 1 part chlorine bleach to 5 parts water. Wet the surface with this solution and let stand 5 minutes before rinsing.

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**Storing Tomato Products**

- Wipe jars and label with date and contents. Screw bands should be removed so the liquid under them will not cause rusting.
- Store jars in a cool, dark, dry place. For best eating quality and nutritive value, use them within 1 year.
- Exposure to heat, freezing temperatures, or light decreases the quality and shelf life of canned foods.
TOMATO MIXTURE RECIPES

All recipes in this bulletin are adjusted to an altitude of 5,000 feet.

TOMATOES - WHOLE OR HALVED
(Packed Raw without Added Liquid)

21 pound tomatoes, peeled, cored
1 T lemon juice per pint/2 T per quart
½ teaspoon salt per pint/1 teaspoon per quart, opt.

Fill jars with raw tomatoes, leaving 1/2-inch headspace. Press tomatoes in jars until spaces between them fill with juice, leaving 1/2-inch headspace. Add lemon juice and salt to jars. Adjust lids and process in Boiling Water Bath for 95 minutes for pints and quarts. Makes 7 quarts.

TOMATOES - CRUSHED (No Added Liquid)

22 pound tomatoes, peeled, cored, quartered
1 T lemon juice per pint/2 T per quart
½ teaspoon salt per pint/1 teaspoon per quart, opt.

Add one-sixth of tomatoes to large saucepan; crush to exude juice. Bring to boil (stir frequently to prevent burning); gradually add remaining tomatoes. Boil gently for 5 minutes. Add lemon juice and salt to jars; fill jars with tomatoes, leaving 1/2-inch headspace. Adjust lids and process in Boiling Water Bath for 45 minutes/pint, 55 minutes/quart. Makes 14 pints or 7 quarts.

TOMATOES (Packed in Tomato Juice)

21 pound tomatoes, peeled, cored
1 T lemon juice per pint/2 T per quart
½ teaspoon salt per pint/1 teaspoon per quart, opt.

Raw Pack: Heat tomato juice in saucepan. Fill jars with raw tomatoes; pour hot juice over top leaving 1/2-inch headspace.*
Hot Pack: Put tomatoes in large saucepan; add enough tomato juice to cover. Boil tomatoes and juice gently for 5 minutes. Ladle hot tomatoes in jars; pour hot juice over top, leaving 1/2-inch headspace.*

*Add lemon juice and salt to jars. Adjust lids and process in Boiling Water Bath for 50 minutes/pint, 55 minutes/quart. Makes 14 pints or 7 quarts.

TOMATO JUICE

23 pounds tomatoes, cut into quarters
1 T lemon juice per pint/2 T per quart
½ teaspoon salt per pint/1 teaspoon per quart, opt.

Wash, remove stems, and trim off bruised or discolored portions. To prevent juice from separating, quickly put 1 pound of tomatoes directly into large saucepan. Heat to a boil while crushing; continue to slowly add the rest of the tomatoes. Boil constantly for 5 minutes after adding all tomatoes. Press through sieve or food mill to remove skins and seeds. Add lemon juice and salt to jars; bring tomatoes back to boil. Pour into hot jars leaving 1/2-inch headspace. Adjust lids; process in Boiling Water Bath for 45 minutes/pint, 50 minutes/quart. Makes 14 pints or 7 quarts.
**TANGY TOMATO JUICE**

10 pounds tomatoes, washed, drained
½ cup lemon juice
1 teaspoon hot pepper sauce
Fresh dill

Peel, core and cut tomatoes into small pieces; simmer until soft. Press tomatoes through a food mill for juice. Add lemon juice and hot pepper sauce; bring almost to a boil. Pour hot into hot jars, leaving 1/4” head space. Add a sprig of dill to each jar; adjust caps. Process 50 minutes in Boiling Water Bath. Makes 5 pints.

**TOMATO PASTE**

8 quarts peeled, cored chopped tomatoes
1 ½ cups chopped sweet red peppers
2 bay leaves
1 teaspoon salt
1 clove garlic, opt.

Combine first four ingredients and cook slowly 1 hour. Press through a fine sieve. Add garlic clove, if desired. Continue cooking slowly until thick enough to round up on a spoon, about 2 ½ hours (stir frequently to prevent sticking). Remove garlic clove and bay leaves. Pour boiling hot paste into hot half-pint jars, leaving ¼-inch headspace. Wipe jar rims. Adjust lids and process in Boiling Water Bath for 45 minutes/pint, 50 minutes/quart. Makes 14 pints or 7 quarts.

**TOMATO SAUCE**

28 pounds tomatoes, cut into quarters (*thick sauce*)
1 T lemon juice per pint/2 T per quart
½ teaspoon salt per pint/1 teaspoon per quart, opt.

Prepare and press as for making Tomato Juice. Simmer in large pan until sauce reaches desired consistency (should be half the volume). Add lemon juice and salt to jars. Fill jars with sauce, leaving 1/4-inch headspace. Adjust lids and process in Boiling Water Bath for 45 minutes/pint, 50 minutes/quart. Makes 9 pints.

**TOMATO/VEGETABLE JUICE BLEND**

22 pound tomatoes
3 cups other vegetables (*no more than 3 cups*)
1 T lemon juice per pint/2 T per quart
½ teaspoon salt per pint/1 teaspoon per quart, opt.

Crush and simmer tomatoes as in Tomato Juice recipe (*previous page*). Add no more than 3 cups of any combination of finely chopped celery, onions, carrots, and peppers. Simmer for 20 minutes; press through a sieve or food mill to remove skins and seeds. Add lemon juice and salt to jars. Reheat mixture to boiling; fill immediately into jars leaving 1/2-inch headspace. Adjust lids and process in Boiling Water Bath for 45 minutes/pint, 50 minutes/quart. Makes 14 pints or 7 quarts.

**MEXICAN TOMATO SAUCE**

2 ½ - 3 lbs chile peppers, peeled
18 lbs tomatoes, peeled, chopped
3 cups onions, chopped
1 tablespoon salt
1 tablespoon oregano
½ cup vinegar

Discard seeds from peeled peppers*; chop. Add tomatoes, onions, salt, oregano and vinegar to large saucepan. Bring to a boil; cover and simmer for 10 minutes. Fill jars, leaving 1-inch headspace. Adjust lid and process in Pressure Canner 20 minutes for pints; 25 minutes for quarts at 12 ½ pound pressure. Makes 14 pints or 7 quarts.

*Oven or Broiler Method:
Place chiles in oven at 400 degrees F. or under broiler for 6-8 minutes until skins blister.

*Range Top Method: Cover hot burner, either gas or electric, with heavy wire mesh. Place chiles on burner for several minutes until skins blister.

**CAUTION:**
Wear rubber gloves while handling chiles or wash hands thoroughly with soap and water before touching your face.

*Place chiles in a pan; cover with damp cloth. Cool; peel, and discard seeds.*
**STEWED TOMATOES**

2 quarts chopped tomatoes  
¼ cup chopped green peppers  
¼ cup chopped onions  
2 teaspoons celery salt  
2 teaspoons sugar  
¼ teaspoon salt  

Combine all ingredients. Cover and cook 10 minutes, stirring occasionally to prevent sticking. Pour hot into hot jars, leaving ½-inch headspace. Remove air bubbles. Wipe jar rims. Adjust lids and process. Process pints in a **Pressure Canner** 15 minutes at 12 ½ pounds pressure. Makes 4 pints.

**TOMATO KETCHUP**

24 pounds tomatoes, slip skins, cored, quartered  
4 teaspoons whole cloves  
3 sticks cinnamon, crushed  
2 cups onions, chopped  
¾ teaspoon ground red pepper (cayenne)  
3 cups cider vinegar (5%)  
1 ½ teaspoons whole allspice  
3 tablespoons celery seeds  
1 ½ cups sugar  
¼ cup salt  

Place tomatoes in large saucepan; add onions and red pepper; bring to boil. Simmer for 30 minutes, uncovered. Combine spices in spice bag; add to vinegar in 2-quart saucepan. Bring to boil; cover and let sit for 20 minutes. Remove spice bag; add vinegar to tomato mixture. Boil for 30 minutes; place through food mill or sieve. Return to pan; add sugar and salt and boil gently. Stir frequently until volume is reduced by half. Fill jars leaving 1/8-inch headspace. Adjust lids and process pints in **Boiling Water Bath** for 20 minutes. Makes 6-7 pints.

**SPAGHETTI SAUCE WITHOUT MEAT**

30 pounds tomatoes, peeled, cored, quartered  
5 cloves garlic, minced  
1 cup chopped onions  
1 cup chopped celery or green peppers  
1 pound fresh mushrooms, sliced (optional)  
2 tablespoons oregano  
4 tablespoons minced parsley  
2 teaspoons black pepper  
4 ½ teaspoons salt  
¼ cup brown sugar  
¼ cup vegetable oil  

Boil tomatoes for 20 minutes, uncovered in a large saucepan. Stir as needed to prevent sticking. Press through a food mill or sieve. Sauté onions, celery or green pepper and mushrooms* (if desired) in vegetable oil until tender. Combine with tomatoes, spices, salt and sugar; bring to a boil. Simmer, uncovered, stirring frequently, until thick enough for serving. (The volume should be reduced by nearly one-half.) Pour into hot jars, leaving 1-inch headspace. Process pints in **Pressure Canner** for 20 minutes; 25 minutes for quarts at 12 ½ pounds pressure. Makes 9 pints.  

*Caution: Do not increase the proportion of onions, peppers, or mushrooms.

**SPAGHETTI SAUCE WITH MEAT**

30 pounds tomatoes, peeled, cored, quartered  
2 ½ pounds ground beef or sausage  
5 cloves garlic, minced  
1 cup chopped onions  
1 cup chopped celery or green peppers  
1 pound fresh mushrooms, sliced (optional)  
2 tablespoons oregano  
4 tablespoons minced parsley  
2 teaspoons black pepper  
4 ½ teaspoons salt  
¼ cup brown sugar  

Prepare other ingredients like **Spaghetti Sauce without Meat** recipe. Add sauteed beef or sausage. Pour into hot jars, leaving 1-inch headspace. Process pints in **Pressure Canner** for 60 minutes for pints; 70 minutes for quarts at 12 ½ pounds pressure. Makes 9 pints.
SPICY CHILI SAUCE

4 quarts peeled, cored chopped tomatoes
2 cups chopped onions
1 ½ cups chopped sweet green peppers
1 ½ cups sugar
1 tablespoon salt
1 tablespoon celery seed
1 teaspoon ground all spice
1 teaspoon ground cloves
1 teaspoon ground cinnamon
1 teaspoon ground ginger
1 to 1 ½ cups vinegar

Combine all ingredients. Bring to a boil; simmer until thick as desired (about 1 to 2 hours). Stir frequently to prevent sticking. Pour hot sauce into hot half-pint or pint jars, leaving ½-inch headspace. Process in a Boiling Water Bath for 15 minutes.

TACO SAUCE

8 quarts tomatoes, finely chopped
2 cloves garlic, chopped
5 cups onion, chopped
4 Jalapeno peppers, chopped
4 green chilies, peeled, seeded, chopped
1 cup vinegar
2 ½ tablespoons salt
½ tablespoon white pepper
¼ cup sugar
2 tablespoons meat tenderizer, optional
1 tablespoon cumin
1 teaspoon dried cilantro
1 tablespoon oregano
1 teaspoon chili powder

Combine all ingredients and cook until thick (1-2 hours) stirring occasionally. Pack hot into hot jars. Adjust lids; process pints in Boiling Water Bath for 40 minutes. Makes 14 pints.

HOT CHILI SALSA

5 pounds tomatoes
2 pounds chile peppers, peeled*
1 pound onions, chopped
1 cup vinegar
3 teaspoons salt
½ teaspoon pepper

Wash, dry, peel, and chop chiles*. Wash tomatoes; peel and remove cores; coarsely chop. Add onions, peppers and remaining ingredients in a large saucepan. Heat to a boil and simmer 10 minutes. Pour into hot pint jars, leaving ½-inch headspace. Process pints in Boiling Water Bath for 15 minutes.

*Peel peppers as for Mexican Tomato Sauce recipe.

CHILE SALSA (Hot Tomato-Pepper Sauce)

5 lbs tomatoes, peeled 1 cup vinegar (5%)
2 lbs chile pepper 3 teaspoons salt
1 pound onion ½ teaspoon pepper

Peel and prepare chiles as for Mexican Tomato Sauce. Coarsely chop tomatoes; combine with peppers, onions, vinegar, salt and pepper in a large saucepan. Bring to a boil; simmer for 10 minutes. Fill jars, leaving 1/2-inch headspace. Adjust lids and process pints in Boiling Water Bath for 20 minutes. Makes 6-8 pints.

SALSA (with Ultra Gel)

2 large onions, chopped
10 cups tomatoes, peeled, chopped
2 lbs chili peppers or 4 cans (6 ½ oz each) green chilis
3 teaspoons salt
½ teaspoon pepper
½ cup tomato paste
1 cup vinegar (5%)
½ cup Ultra Gel (thickening agent)

Prepare peppers as for Mexican Tomato Sauce. Combine all vegetables in heavy 8-10 quart pan. Add salt, pepper, tomato paste and vinegar, stirring until blended; bring to a boil. Stir in Ultra Gel with a wire whisk; simmer 10 minutes. Fill jars, leaving 1/2-inch headspace. Adjust lids; process in Boiling Water Bath for 45 minutes.
PIZZA SAUCE

2 quarts tomatoes, peeled, chopped
4 tablespoons green pepper, chopped
4 tablespoons onion, chopped
2 tablespoons sugar
1 teaspoon salt
2 cans (6 oz each) tomato paste
2 tablespoons garlic powder
2 tablespoons Italian seasoning
1 tsp. citric acid or 2 T. lemon juice


ENCHILADA SAUCE

2 quarts tomatoes, peeled, quartered
4 tablespoons chili powder
1-2 jalapeno peppers
1 teaspoon salt
1 tablespoon sugar
1 teaspoon white pepper
1 tablespoon garlic juice
2 cans (6 oz each) tomato paste
1 teaspoon citric acid or 2 tablespoons lemon juice

Combine all ingredients and cook until thoroughly heated. Process through a sieve or colander. Reheat to simmer; pack into pint jars, leaving 1/2" headspace. Process in Boiling Water Bath for 40 minutes. Makes 5 pints.

TOMATOES W/OKRA OR ZUCCHINI

12 pounds tomatoes, peeled, cored, quartered
4 lbs okra or zucchini, washed
1 teaspoon salt per quart, optional
4-5 pearl onions per quart, optional

Trim stems from okra; slice into 1-inch pieces (cube zucchini). Bring tomatoes to a boil; simmer for 10 minutes. Add okra or zucchini; boil gently for 5 minutes. Add salt if desired. Fill jars with mixture, leaving 1-inch headspace. Adjust lids and process in a Pressure Canner 30 minutes for pints, 35 minutes for quarts at 12 ½ pounds pressure.

BARBECUE SAUCE

4 quarts peeled, cored, chopped tomatoes
2 cups chopped celery
2 cups chopped onions
1 ½ cups chopped sweet red or green peppers
2 red hot peppers, cored, chopped
2 cloves garlic, crushed
1 cup brown sugar
1 tablespoon dry mustard
1 tablespoon paprika
1 tablespoon salt
1 tablespoon black peppercorns
1 teaspoon hot pepper sauce
½ teaspoon cayenne pepper
1 cup vinegar

Combine tomatoes, onions, celery and peppers. Cook until vegetables are soft (about 30 minutes). Purée using a fine sieve, food mill, food processor or blender. Cook until mixture is reduced to about one-half (approximately 45 minutes). Tie peppercorns in a cheesecloth bag; add with remaining ingredients. Cook slowly until mixture is the consistency of catsup, about 1 ½ to 2 hours. As mixture thickens, stir frequently to prevent sticking. Remove bag of peppercorns. Pour hot barbecue sauce into hot half-pint or pint jars, leaving ½-inch headspace. Process in a Boiling Water Bath for 20 minutes.

TOMATO RELISH

2 ¾ cups tomatoes
½ teaspoon cloves, ground
¼ cup lemon juice
½ teaspoon cinnamon
1 package pectin
½ teaspoon allspice
4 ½ cups sugar

Scald, peel and crush fresh tomatoes. Place in large kettle; add lemon juice and pectin; stir well. Place over high heat; bring to a boil (stir constantly). Add sugar, cloves, cinnamon and allspice; mix well. Continue stirring and bring to a full rolling boil. Boil hard 4 minutes, remove from heat. Skim foam and pour into jars; process in Boiling Water Bath for 15 minutes.
**TOMATO JUICE JELLY**

3 ¼ cups tomato juice
¾ cup lemon juice
1 package powdered pectin
4 ½ cups sugar

Pour tomato juice into 6-8 quart pan. Add lemon juice and pectin to juice; stir well. Place over high heat; bring to boil (stir constantly). Add sugar; mix well. Continue stirring and bring to a full rolling boil (a boil that cannot be stirred down). Boil hard exactly two minutes, remove from heat. Skim foam and pour into pint jars; process in a Boiling Water Bath for 10 minutes. Makes 5 half-pints.

**GREEN TOMATO MINCMEAT**

2 quarts green tomatoes, cored, chopped
1 tablespoon salt
3 tablespoons orange peeled, grated
½ cup orange pulp, chopped
2 ½ quarts apples, peeled, chopped
1 pound raisins
1 ½ cups (6 oz) suet, chopped
3 ½ cups brown sugar
½ cup vinegar
2 teaspoons cinnamon
1 teaspoon nutmeg
1 teaspoon cloves
½ teaspoon ginger

Sprinkle salt over tomatoes; let stand 1 hour. Rinse and drain. Cover tomatoes with boiling water; let stand 5 minutes. Drain well. Combine all ingredients in a large saucepan; bring to a boil. Ladle hot mincemeat into hot jars, leaving 1-inch headspace. Adjust lids and process in a Boiling Water Bath for 10 minutes. Makes 10 pints or 5 quarts.

**SPICED TOMATO JAM**

3 cups tomatoes, peeled, cored, chopped
1½ teaspoons grated lemon rind
½ teaspoon ground allspice
½ teaspoon ground cinnamon
¼ teaspoon ground cloves
¼ cup lemon juice
1 box powdered pectin
4½ cups sugar

Place tomatoes in saucepan; cover and simmer 10 minutes (stir constantly). Add lemon rind, allspice, cinnamon, cloves and lemon juice. Stir powdered pectin into prepared tomatoes. Bring to a boil over high heat, stirring constantly. Stir in sugar; bring to a full rolling boil that cannot be stirred down. Then boil hard for 1 minute, stirring constantly. Remove from heat; skim off foam. Pour hot jam into hot jars, leaving ¼-inch headspace. Adjust lids; process in a Boiling Water Bath for 10 minutes. Makes 5 half-pints.

**TOMATO MARMALADE**

3 medium oranges, cut into thin cartwheels
3 cups water
¼ cup lemon juice
1 ½ cups ground ripe tomatoes
2 tablespoons lemon juice
2 tablespoons boiling water
6 ½ cups sugar
⅛ teaspoon salt
Grated rind of one lemon
1 package pectin

Add oranges, 3 cups water, ¼ cup lemon juice to large pan; bring to quick boil. Simmer uncovered for one hour. Measure to make 3 ½ cups (may add water if needed). Combine orange mixture, tomatoes, boiling water, salt and lemon rind into large pan; add pectin, bring to a boil. Add sugar; bring to boil; boil hard for 4 minutes. Skim foam; pour into jars. Process in Boiling Water Bath for 10 minutes.

Sources: Georgia Lauritzen, USU Food & Nutrition Specialist; United States Department of Agriculture; Tasty Tomato, USU Extension, Weber County