University of California Cooperative Extension is committed to helping rural and urban people through teaching, research and extension. Extension takes research-based knowledge and offers it in accordance with the needs of the community.

Cooperative Extension in El Dorado County works by helping people help themselves in its commitment to provide informal, off-campus educational opportunities in food preservation.

The Master Food Preservers Program offers free public classes to teach the art and science of all phases of safe home food preservation.

Program instructors are trained by Cooperative Food Science specialists.

From the Garden to the Table

What to do with your beautiful, bountiful, homegrown tomatoes

Presented by: Cindy Young, MG, MFP
Judi Johnson, MG, MFP

Questions? Call the Master Food Preservers at (530) 621-5506 (VoiceMail)
MFP e-mail: edmfp@ucdavis.edu - MFP Website: http://cecentralsierra.ucanr.edu
Use the Right Equipment
Standard canning jars, lids and rings must be used.
A deep, non-reactive kettle.. stainless steel, enameled, or glass must be used for cooking the product.
Use an approved recipe for the best results, as these recipes have been tested for quality, flavor and safety.

Open Kettle Canning
The USDA does not recommend this method of canning.

Atmospheric Steam Canner
The USDA does not recommend the use of an atmospheric steam canner.

Paraffin is not recommended as a sealing agent.

Use the Best Ingredients
Select fruit of good flavor and color, but not fully ripe. For jam and jelly it is better to have some under-ripe fruit as it contains more pectin and acid than fully ripe fruit.

Getting Ready, Be Prepared
Read the recipe thoroughly before you begin.
Measure out all ingredients.
Read the directions on the pectin package, if used. Do not change the quantities in any recipe that calls for pectin. For boiling times, follow the times listed in the pectin package or the finished product will not turn out correctly.
Have all necessary utensils at hand.
Wash jars, lids and rings in hot soapy water and rinse well.
Place clean jars into the canner and heat the jars to simmering, 180°.
Put lids and rings in a pan of hot water, heat to simmering.

Fill and Seal Jars Properly
Fill hot jars with hot mixture. Leave the headspace specified in the recipe.
Place lids and rings on jars, tightening the rings only finger tight.

Boiling Water Canner Processing
Place jars in a canner with a rack. The jars should not sit directly on the bottom of the canner. Water should be very hot but not boiling. Add enough water to cover the tops of the jars by at least 1". For processing times over 30 minutes, the water level should be 2" above the jars.
Place lid on canner. Bring the water to a vigorous boil. The heat setting may be lowered a little as long as a complete boil is maintained for the entire process time. Begin to count processing time when the water comes to a vigorous boil. Process for the time indicated in the recipe.

Adjusting for Altitude
All recipes are developed using sea level as the criteria for processing time. If you are at a higher altitude you must adjust the processing times according to the following chart.

<table>
<thead>
<tr>
<th>Altitude in feet</th>
<th>Increase processing time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000 - 3000</td>
<td>5 minutes</td>
</tr>
<tr>
<td>3001 - 6000</td>
<td>10 minutes</td>
</tr>
<tr>
<td>6001 – 8000</td>
<td>15 minutes</td>
</tr>
<tr>
<td>8001 – 10000</td>
<td>20 minutes</td>
</tr>
</tbody>
</table>

Remove the jars from the canner at the end of the time. Do not let the jars cool in the canner. When you take the jars from the canner after processing, hold upright; do not disturb the seal. Do not retighten the rings. Place the hot jars on a rack or folded towel away from drafts or cool surfaces. Keep the jars separated so they will cool evenly. Leave the ring bands on the jars until they have cooled thoroughly, approximately 24 hours. Do not try to dump the water off the lids.

Inverting Jars: Some canning books still recommend inverting the jars after removing them from the boiling water canner. The USDA does not recommend this method.
After the jars have cooled, remove the ring bands. Look at the top of each jar. If the lid is slightly concave, it indicates a seal. Test the seal by pressing on the lid with your finger; the lid should not give. If you are not sure a jar is sealed, carefully lift the jar by the lid after removing the ring band. If not properly sealed, the lid will come off.
Wash and dry bands. Clean the jars with a damp cloth. The ring bands may be replaced on the jars if desired. The ring bands must be thoroughly dry.
Label and date the jars, and store in a cool, dark, dry area.

Reprocessing: If a jar did not seal, refrigerate and use within a few days, or it may be reprocessed within 24 hours, using a new metal lid. Check the jar for flaws. Process by
the method originally advised and for the full length of time.

**Food Safety**
Contrary to popular belief, tomatoes are not a high acid food. They are borderline high acid with a pH of approximately 4.6. This is too close to the dividing line between high and low acid foods. As a result, homemade tomato products must be acidified by adding bottled lemon juice, citric acid or even vinegar before they are heat processed in a boiling water bath or a pressure canner. For this reason, it is important to use a recipe from a safe source and to acidify your tomato products correctly.

Today’s tomato hybrids are developed to be less acidic. This is especially true for Roma-type tomatoes, which are popular for sauces. Once other vegetables, such as peppers, onions, celery and herbs are added, the acidity is lowered even further. Therefore, one needs to either follow a tested recipe from a safe source, or pressure can tomato sauces. Water bath canning is only used for high acid foods.

If your tomato products are not correctly processed based on the recipe your product could be unsafe for consumption. Mold, E. coli, or botulism are real food hazards if the product is not processed correctly.

**Selecting The Tomato**
The home canner should use the best quality, vine ripened tomatoes whenever possible. Tomatoes from dead or frost killed vines should never be used. Most of today’s tomatoes have been bred for sweetness versus acidity. For this reason, additional acid should be added to canned tomatoes, tomato puree, tomato sauce and tomato juice in the form of either bottled lemon juice, citric acid or vinegar that has an acidity of at least 5%. Green tomatoes are more acidic than red tomatoes and can be canned safely by the water bath method. Tomatillos may also be canned in a water bath canner but must be acidified the same as tomatoes.

**Canned Tomatoes**
Sort tomatoes, picking out any that are spoiled or green. Do not can over-ripe tomatoes. They may be too low in acid for safe water bath canning. If tomatoes are excessively dirty, wash with a solution containing one Tbsp. chlorine bleach in one gallon of water. To peel tomatoes, dip tomatoes in boiling water long enough to crack the skins (about 1 minute). Cutting a shallow X in the blossom end of the tomato speeds this process. Dip in cold water. Peel and remove cores. Save any juice to add to the hot liquid in which you boil the tomatoes.

<table>
<thead>
<tr>
<th>Acidity Chart</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottle Lemon Juice</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Citric Acid</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Vinegar, 5% acidity</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

**Hot Pack**: Bring whole or halved, peeled tomatoes to a low boil over medium heat. Add lemon juice to jars. Pack hot tomatoes into hot jars. Cover with the hot water in which the tomatoes were heated. Leave ½” headspace. Add salt, if desired (1 tsp. to each quart jar or ½ tsp. to each pint jar). Remove air bubbles. Wipe the rims clean. Place lids and rings on jars, tightening rings finger tight. Process (pints for 40 minutes and quarts for 45 minutes) in a boiling water canner.

**Raw Pack**: Remove jars from hot water. Add lemon juice. Pack raw, whole or halved peeled tomatoes into hot jars. Cover tomatoes in jars with boiling water leaving ½” headspace. Add salt, if desired (1 tsp. for each quart or ½ tsp. for each pint). Remove air bubbles. Wipe the rims clean. Place lids and rings on jars, tightening rings finger tight. Process pints for 40 minutes and quarts for 45 minutes in boiling water canner.

**Note**: if you use boiling tomato juice instead of boiling water to cover tomatoes, processing time is 85 minutes for both pints and quarts.

Source: National Center for Home Food Preservation
http://www.uga.edu/nchfp/how/can3_tomato.html

**Chunky Tomato Salsa**
**Yield**: 5 cups

8 med. tomatoes, peeled and chopped (about 2 lbs.)
2 med. onions, finely chopped
1 green bell pepper, chopped
2-6 jalapeno peppers, seeded and chopped
6 cloves garlic, minced
1 cup tomato sauce
1 cup red wine vinegar (5%)
1 cup chopped fresh parsley or cilantro
1 Tbsp sugar
1 tsp pickling salt
1 tsp ground cumin

Combine all ingredients in a medium saucepan. Bring to boil over high heat; reduce heat and boil gently, uncovered, stirring frequently, for 25 minutes or until desired consistency is reached. Ladle salsa into hot jars, leaving ½” headspace. Remove air bubbles. Wipe jar rims clean. Place lids and rings on jars, tightening rings finger tight. Process 20 minutes in a boiling water bath canner for pints and half-pints.

Spiced Tomato Jam
3 cups tomatoes, peeled and chopped (about 2½ lbs.)
1 ½ tsp grated lemon rind
½ tsp ground allspice
½ tsp ground cinnamon
¼ tsp ground cloves
¼ cup lemon juice
4 ½ cups sugar
1 box powdered regular pectin

Place chopped tomatoes in saucepan and heat slowly to simmering, stirring constantly to prevent sticking. Cover and simmer 10 minutes, stirring occasionally. Measure 3 cups of cooked tomatoes and put in a large pot. Add lemon rind, spices and lemon juice. Stir in powdered pectin. Bring to a boil over high heat, stirring constantly. Stir in sugar all at once. Stir and bring to a full rolling boil that cannot be stirred down. Boil hard for 1 minute, stirring constantly. Remove from heat. Skim foam if necessary. Ladle hot jam into hot jars, leaving ¼” headspace. Remove air bubbles; adjust headspace if necessary. Wipe rims; place lids and rings on jars. Tighten rings only finger tight. Process 10 minutes in a boiling water canner. Yield: About 5 half pints.

Source: Nat'l Center for Home Food Preservation

Chunky Basil Pasta Sauce

Yield: About 4 pints.

8 cups tomatoes, peeled and coarsely chopped, about 4 lbs.
1 cup onion, chopped
3 cloves garlic, minced
⅔ cup red wine
½ cup red wine vinegar (5%)
½ cup fresh basil, chopped
1 Tbsp fresh parsley, chopped
1 tsp pickling salt
½ tsp granulated sugar
1 can tomato paste (6 oz.)

Combine all ingredients in a large kettle. Bring to a boil over high heat; reduce heat and simmer uncovered, stirring frequently, for 40 minutes or until thickened to desired consistency. Ladle hot sauce into hot jars, leaving 1/2” headspace. Carefully run a non-metallic utensil down inside of jars to release trapped air bubbles; re-adjust headspace if required. Wipe jar rims clean. Place lids and rings on jars, tightening rings finger tight. Process pints 35 minutes and quarts 40 minutes in a boiling water canner.

Source: Small-Batch Preserving, 2nd Edition

Tomatillo Salsa

Yield: 4 half pints or 2 pints

5 ½ cups chopped, cored, husked tomatillos
1 cup chopped onion
1 cup chopped, seeded green chili peppers (hot or mild)
½ cup white vinegar (5%)
4 Tbsp lime juice
4 cloves garlic, finely chopped
2 Tbsp chopped cilantro
2 tsp ground cumin
½ tsp salt
½ tsp hot pepper flakes (optional)

Combine all ingredients in a large stainless steel saucepan. Bring to a boil over medium-high heat, stirring constantly. Reduce heat and simmer gently for 10 minutes. Ladle hot salsa into hot jars, leaving ½” headspace. Remove air bubbles. Wipe jar rims clean. Place lids and rings on jars, tightening rings finger tight. Process both half pint and pint jars for 15 minutes in a boiling water canner.

Source: Ball Complete Book of Home Preserving
Tomatoes

Dried tomatoes must be properly packaged because tomatoes readily reabsorb moisture. This will shorten their storage life and cause undesirable flavor changes. Some dried tomatoes turn black during storage due to low acid. This does not harm the tomatoes; just makes them unappetizing. The best varieties of tomatoes to dry are any of the firm, full-flavored varieties. The newer sweet, low acid tomatoes do not dry successfully.

Choose firm, ripe, bright red tomatoes. They should be thick-walled with a high acid content.

There is no pretreatment required for tomatoes.

Wash, core, and peel (if desired) the tomatoes. To peel a tomato, immerse in boiling water for 30 to 45 seconds. Immediately place in cold water and peel. Slice tomatoes crosswise ⅜” to ½” thick with a very sharp stainless steel knife. Avoid crushing the tissue. Dry at 140° F for 2 to 3 hours, then finish at 130° F until dry. Tomatoes should be dried to brittle stage. To use the dried tomatoes, crush, crumble, chop and sprinkle over salads, pasta, or use in soup and stews. High acid tomatoes will sun dry satisfactory.

Dried Tomatoes In Olive Oil

1 Tbsp red wine vinegar (5%)
2 Tbsp water or wine
½ tsp salt
½ tsp cayenne or Tabasco
¼ tsp dried marjoram
½ tsp dried thyme
½ tsp dried rosemary
1 to 4 cloves of garlic (to your taste)
3 oz dried tomatoes (1¼ -1½ cup)
1 bay leaf
1 cup olive oil

Blend first 7 items. Pour over dried tomatoes and bay leaf in a quart jar. Shake container and let stand 6 to 8 hours, turning occasionally until liquid is absorbed. These are general instructions. Add olive oil. The choice of herbs is yours. Try adding black peppercorns, dried basil, leaving out the cayenne or Tabasco or leaving out the salt. It's your choice!

NOTE: This must be refrigerated and used within 4 days or frozen for long-term storage. Makes about 1 ½ cups.

Freezing Tomatoes

Tomatoes are best frozen stewed or pureed. Select ripe tomatoes free from blemishes. Remove stem ends, peel and quarter. Cook until tender Cool by setting pan in cold water.

Packing in containers

Pack foods tightly into containers. Allow ample headspace between the packed food and the lid to allow room for expansion during freezing. Products packed in pint containers require ½” headspace. Products packed in quart containers require 1” headspace. When food is packed in freezer bags, squeeze out as much air as possible. Label containers with name of product and date.

MFP Website: http://cecentralsierra@ucanr.edu
NCHFP Website: http://nchfp.uga.edu