



LET'S PRESERVE

PICKLES

WP 397-99

These processing recommendations are for West Virginia conditions (maximum altitude, 4,000 feet). For canning directions in other locations, consult your county Extension office.

Recommended varieties of cucumbers

Use open-pollinated pickling cucumbers, such as SMR 58, Wisconsin SMR 18, and Multipik, or hybrids, such as Premier, Bounty, Score, and Calypso.

Quality

Select firm cucumbers of the appropriate size, about 2 inches for gherkins and 5 inches for dills. Use odd-shaped and more mature cucumbers for relishes and bread-and-butter style pickles.

Containers, weights, and covers for fermenting

A 1-gallon container holds 5 pounds of fresh cucumbers; a 5-gallon container holds 25 pounds. Glass and food-grade plastic containers are excellent substitutes for stone crocks. Other 1- to 3-gallon food-grade containers may be used if lined inside with a clean food-grade plastic bag. *Do not use garbage bags or trash liners.* A large, sealed, food-grade plastic bag containing 4½ tablespoons of salt and 3 quarts of water can be used as a weight to hold cucumbers under the surface of the brine. A plate and jars of water can also be used. Select a pie or dinner plate just small enough to fit inside the fermentation container. Cover the weight and container top with several thicknesses of muslin, cheesecloth, or uncolored clean bath towel to reduce mold growth on the brine surface.

Preparation

Wash cucumbers and cut 1/16 inch off the blossom end when specified in directions.

If you prefer pickles that are especially firm, mix 1 cup pickling lime and ½ cup salt to 1 gallon of water in a 2- to 3-gallon crock or enamelware container. Avoid inhaling lime-water solution while mixing. Soak cucumbers in lime water for 12 to 24 hours. Remove cucumbers from lime solution, rinse, and resoak 1 hour in fresh cold water. Repeat the rinsing and soaking steps in fresh water two more times. Handle carefully, as slices will be brittle. Drain well.

Canning procedure

Wash jars. Prepare lids according to manufacturer's instructions. Fill jars with product. Wipe sealing edge of jars with a clean, damp paper towel. Add lids and tighten screw bands. Process jars in a boiling-water canner or use the low temperature pasteurization treatment.

To process in a boiling-water canner, fill canner halfway with water and preheat to 180 degrees F for hot packs or 140 degrees F for raw packs. Load sealed jars into the canner rack and lower with handles; or load one jar at a time with a jar lifter onto rack in canner. Add water if needed to a level of 1 inch above jars and add cover. When water boils vigorously, lower heat to maintain a gentle boil and process jars for the time given in the following *Process Times* section.

To process using low-temperature pasteurization treatment, place jars in a canner filled halfway with warm (120 degrees F to 140 degrees F) water. Add hot water to a level 1 inch above jars. Heat the water and maintain a 180 degrees F water temperature for 30 minutes. Use a candy or jelly thermometer to be certain that the water temperature is at least 180 degrees F during the entire 30 minutes. Temperatures higher than 185 degrees F may cause unnecessary softening of pickles. This treatment results in a better product texture but must be carefully managed to avoid possible spoilage. Caution: Use only when recipe indicates.

After processing is completed, remove jars from canner with a jar lifter and place on a towel or rack. Do not retighten screw bands. Cool jars 12 to 24 hours and remove screw bands. Check lid seals. If the center of the lid is indented, the jar is sealed. Wash, dry, label, and store sealed jars in a clean, cool, dark place. If the lid is unsealed, examine and replace jar if defective, use new lid, and reprocess as before. Wash screw bands and store separately. Pickles are best if used within a year and safe as long as lids remain vacuum-sealed.

Process times

The recommended processing times are for a boiling-water canner.

It is recommended that raw pack be used for making Quick Fresh Pack Dill pickles. When using pint jars, process for 15 minutes, and process for 20 minutes when canning with quart jars.

When preparing the Quick Sweet pickles, hot or raw packing may be used. For hot pack, when using pint or quart jars, processing time is 10 minutes. Raw pack processing for pint jars is 15 minutes and 20 minutes for quart jars.

Raw pack should be used when preparing the Sweet Gherkin pickle. When using pint jars process the pickles for 10 minutes and 15 minutes when using quart jars.

When preparing Bread and Butter pickles, use the hot style of packing. Process the pickles for 15 minutes if using pint *or* quart jars.

Use the hot style of packing when preparing Pickle Relish. Process the relish for 15 minutes using either half-pint or pint jars.

Quick fresh pack dill pickles

8 pounds of 3- to 5-inch pickling cucumbers
2 gallons water
1 $\frac{1}{4}$ cups canning or pickling salt
1 $\frac{1}{2}$ quart vinegar (5%)
 $\frac{1}{4}$ cup sugar
2 quarts water
2 Tbsp. whole mixed pickling spice
3 Tbsp. whole mustard seed (2 tsp. per quart jar)
21 heads to about 14 heads fresh dill (3 heads to 1 $\frac{1}{2}$ heads per pint), and
7 Tbsp. to 4 $\frac{1}{2}$ Tbsp. dill seed (1 Tbsp. to 1 $\frac{1}{2}$ tsp. per pint)
Yield—7 to 9 pints

Procedure: Leave $\frac{1}{4}$ inch of cucumber stem ends attached. Dissolve $\frac{3}{4}$ cup salt in 2 gallons of water. Pour brine water over cucumbers and let stand 12 hours. Drain. Combine vinegar, $\frac{1}{2}$ cup salt and 2 quarts water. Add mixed pickling spices tied in a clean white cloth. Heat to boiling. Fill jars with cucumbers. Add 1 teaspoon mustard seed and 1 $\frac{1}{2}$ heads fresh dill per pint. Cover with boiling liquid, leaving $\frac{1}{2}$ -inch headspace. Adjust lids and process jars as described earlier or use the low-temperature pasteurization treatment described earlier.

Quick sweet pickles

8 pounds of 3- to 4-inch pickling cucumbers
 $\frac{1}{3}$ cup canning or pickling salt
4 $\frac{1}{2}$ cups sugar
3 $\frac{1}{2}$ cups vinegar (5%)
2 tsp. celery seed
1 Tbsp. whole allspice
2 Tbsp. mustard seed
1 cup pickling lime (optional—use in pickling lime treatment)
Yield—7 pints

Procedure: Leave $\frac{1}{4}$ inch of stem ends of cucumbers attached. Slice or cut in strips, if desired. Place in bowl and sprinkle with $\frac{1}{3}$ cup salt. Cover with 2 inches of crushed or cubed ice. Refrigerate 3 to 4 hours. Add more ice as needed. Drain well. For firmer pickles, use the pickling lime treatment described on page 1.

Combine sugar, vinegar, celery seed, allspice, and mustard seed in a 6-quart pot to make pickling syrup. Heat to boiling. For a hot pack; add cucumbers and heat slowly until vinegar mixture returns to boil. Stir occasionally to make sure vinegar mixture heats evenly. Fill sterile jars with cucumbers and add hot pickling syrup, leaving $\frac{1}{2}$ -inch headspace. For a raw pack; fill jars with cucumbers and add hot pickling syrup, leaving $\frac{1}{2}$ -inch headspace. Adjust lids and process jars as described earlier, or use the low temperature pasteurization treatment described earlier. Variation: Add two slices of raw whole onion to each jar before filling with cucumbers.

Sweet Gherkins

7 pounds cucumbers (1½ to 2 inch)
½ cup canning or pickling salt
8 cups sugar
6 cups vinegar (5%)
¾ tsp. turmeric
2 tsp. celery seed
2 tsp. whole mixed pickling spice
Cinnamon sticks
½ tsp. fennel (optional)
2 tsp. vanilla (optional)
Yield—6 to 7 pints

Procedure: Leave ¼ inch of stem attached. Place cucumbers in large container and cover with boiling water. Six to 8 hours later, and on the second day, drain and cover with 6 quarts of fresh boiling water containing ¼ cup salt. On the third day, drain and prick cucumbers with a table fork. Combine and bring to boil 3 cups vinegar, 3 cups sugar, turmeric, and spices. Pour over cucumbers. Six to 8 hours later, drain and save the pickling syrup. Add another 2 cups each of sugar and vinegar, and reheat to boil. Pour over pickles. On the fourth day, drain and save syrup. Add another 2 cups sugar and 1 cup vinegar. Heat to boiling and pour over pickles. Six to 8 hours later, drain and save pickling syrup. Add 1 cup sugar and 2 teaspoons vanilla; heat to boiling. Fill sterile pint jars with pickles and cover with hot syrup, leaving ½-inch headspace. Adjust lids and process as described earlier, or use the low-temperature pasteurization treatment described earlier.

Bread-and-butter pickles

6 pounds of 4- to 5-inch pickling cucumbers
2 quarts thinly sliced onions (about 3 pounds)
½ cup canning or pickling salt
1 quart vinegar (5%)
4½ cups sugar
2 Tbsp. mustard seed
1½ Tbsp. celery seed
1 Tbsp. ground turmeric
1 cup pickling lime (optional—use in pickling lime treatment)
Yield—About 8 pints

Procedure: Cut cucumbers into ⅜-inch slices. Combine cucumbers and onion slices in a large bowl. Add salt. Cover with 2 inches crushed or cubed ice. Refrigerate 3 to 4 hours, adding more ice as needed. For firmer pickles, use the pickling lime treatment described on page 1.

Add sugar and remaining ingredients to vinegar in a large pot. Boil 10 minutes. Drain and add cucumbers and onions; slowly reheat to boiling. Fill pint jars with slices and cooking syrup, leaving ½-inch headspace. Adjust

lids and process jars as described earlier or use the low-treatment pasteurization treatment also described earlier. Variation: Squash bread-and-butter pickles. Substitute slender (1½ to 2 inches in diameter) zucchini or yellow summer squash for cucumbers. Store 4 to 5 weeks to develop flavors before eating.

Pickle relish

3 quarts fresh chopped cucumber
 3 cups chopped sweet green peppers
 3 cups chopped sweet red peppers
 1 cup chopped onion
 ¾ cup canning or pickling salt
 2 quarts water
 1 quart ice
 2 cups sugar
 4 tsp. each of mustard seed, turmeric, whole allspice, and whole cloves
 1½ quarts white vinegar (5%)
 Yield—8 to 9 pints

Procedure: Add salt, ice, cucumber, peppers, and onions to water and let stand 4 hours. Drain and cover vegetables with fresh ice water for another hour. Drain again. Combine spices in a spice bag or cheesecloth bag. Add spices to sugar and vinegar. Heat to boiling and pour mixture over vegetables. Cover and refrigerate 24 hours. Heat mixture to boil and fill clean jars while hot, leaving ½-inch headspace. Adjust lids and process jars as described on page 2.

Nutrition information

Average content per ½ cup serving (4 to 4.4 ounces) of pickles

	Raw cucumber (unpeeled)	Raw cucumber (peeled)	Pickled dill	Pickled sweet	Pickle relish
Calories	8	10	118	117	166
Carbohydrates, g	1.8	2.2	1.7	27	42
Fats, g	0.05	0.05	0.15	0.3	0.7
Protein, g	0.45	0.4	0.55	0.55	0.6
Sodium, mg	3	4	1,106	—	872
Vitamin A*	2	—	—	—	—
Vitamin C*	10	10	—	—	—

*Expressed as percentage of U.S. Recommended Daily Allowances (US RDA). Cucumbers and pickles are an insignificant source of other vitamins.

Adapted from *Let's Preserve Pickles*, Pennsylvania State University College of Agriculture Sciences, Cooperative Extension, and reviewed by Amy O'Dell, Graduate Assistant, and Guendoline Brown, Ph.D., Nutrition and Health Specialist, June 1999.

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