

EXTENSION CONNECTION – Canning Tomatoes

By: Paulelda Gilbert, ISU Extension Nutrition & Health Specialist

Q. I have canned tomatoes for years, but this time the lids have popped off, though they were sealed after I put the hot tomatoes in jars.

A. The “open-kettle” method of canning is unsafe because undesirable organisms could grow and lower acidity enough to allow production of botulism or other food bacteria. In the “open-kettle” method you risk not keeping the entire contents of the pan cooking at a boiling temperature; you risk contamination as you fill jars and handle the jars, lids and utensils.

Therefore, once jars of tomatoes are filled and lids are tightened, they need to be placed in a boiling water bath or pressure canner for a specified amount of time, to kill all harmful bacteria. When this step is not taken, bacteria might be present which grows in the jars once they return to room temperature and the lids will not stay sealed. The food then needs to be discarded. All home canned foods (fruit, vegetables, jam and jellies) need to be processed after jars are filled to ensure food safety.

Q. Why do we need to add lemon juice to our home canned tomatoes?

A. Our current varieties of tomatoes are not as high in acid as they used to be. To ensure safe acidity in whole crushed, or juiced tomatoes, you must add bottled lemon juice or food grade citric acid to each jar before processing. For quarts, use 2 tablespoons lemon juice or ½ teaspoon citric acid per quart. For pints use 1 tablespoon bottled lemon juice or ¼ teaspoon citric acid. Food grade citric acid is available at some food stores or drug stores. Do not substitute ascorbic acid for citric acid.

Q. Why is the acid content of the tomato important?

A. Improperly canned tomatoes have caused some cases of botulism poisoning in recent years. Botulism comes from dangerous toxins that are produced when *Clostridium botulinum* spores grow in low acid foods. These factors affect the acidity and therefore the safety of tomatoes for home canning.

Tomato cultivars (variety) vary in acidity. Growing conditions, climate and location also affect acidity. Overripe and infected tomatoes may be low enough in acid to support *Clostridium botulinum*. Use only firm, ripe tomatoes that have no spoiled parts or mold. Tomatoes harvested from dead vines are low in acid. They can be eaten fresh or frozen, but do not can tomatoes from dead vines.

Do not add any ingredients beyond those given in the directions. Adding other vegetables can lower the acidity and change the processing time.

To can spaghetti sauce or other tomato mixtures, use tested recipes such as those found in Complete Guide to Home Canning, AB 539, available at <http://extension.usu.edu/publica/foodpubs.htm> or call ISU Extension’s Answer Line 1-800-262-3804 or Greene county extension office 515-386-2138.

Call Paulelda Gilbert at the Webster County Extension Office, 576-2119 or e-mail pgilbert@iastate.edu, with your nutrition and health questions.