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Tomatoes and potatoes infected with late blight: Are they safe for eating or preserving?

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With the discovery of late blight in tomatoes and potatoes in parts of Wisconsin, gardeners are wondering whether ripening tomatoes or freshly harvested potatoes are safe for eating or preserving.

Late blight is a common disease in tomatoes and potatoes caused by the fungus *Phytophthora infestans*. According to Dr. Luke LaBorde, Pennsylvania State University, "The disease thrives in cool, moist conditions and can wipe out an entire crop within just a few weeks of infestation. In tomatoes, the fruits may become infected initially with firm, dark brown lesions that rapidly become enlarged, wrinkled, and somewhat sunken. The rotted areas are usually located on the top of the fruit and may remain firm or become mushy."

Both green and ripe tomatoes can be infected. Potatoes can become infected both before or after harvest, with the disease appearing as brown, dry and sunken areas.

"The unaffected parts probably are safe to eat. Tomato sections without blight symptoms likely do not pose a health risk to the consumer," says Dr. Margaret McGrath, a plant pathologist at Cornell University and a specialist in the disease.

However, Barbara Ingham, food safety specialist with the University of Wisconsin-Extension, urges consumers to resist the temptation to eat diseased tomatoes or potatoes from late blight-infected plants.

"Since there is no documented harm from eating blight-infected fruit, it may be tempting to simply cut off the infected portion. But the fruit will taste bitter and may be harboring other organisms that could cause food-borne illness."

Ingham also notes that diseased fruit, even with the infected portion removed, should not be canned or frozen.

What if you have unblemished tomatoes growing on plants with leaves, stems or adjacent fruit showing signs of infection? These can be safely eaten, and even preserved, Ingham states.

"Don't be tempted to can or preserve infected tomatoes," says Ingham. "The virus can cause changes in the acidity of tomato fruit which is critical in safely preserving tomatoes. However, unblemished tomatoes can safely be canned, or even frozen," she says.

According to Ingham, tomatoes are the most commonly home-canned item. "It's important to use up-to-date, research-tested recipes to avoid the risk of botulism poisoning from home-canned tomatoes," she says.

The University of Wisconsin-Extension offers the following tips for safe canning of tomatoes.

--Always add acid to tomato products. Whether pressure canning or boiling-water canning, research published in the 1990s shows that tomatoes may not have sufficient acid to avoid botulism toxin from forming, so a small amount of acid is always added.

--Add acid to tomatoes in the proper form. When adding acid, use bottled lemon juice because it has a standard level of acidity. Add 2 tablespoons bottled lemon juice per quart and 1 tablespoon per pint. Another option is to add citric acid, ½ teaspoon per quart or ¼ teaspoon per pint. Citric acid is less widely available, but is used mainly by large commercial canneries. Other acids such as ascorbic acid (vitamin C; Fruit Fresh) or acetic acid (vinegar) are not recommended.

--Avoid canning tomatoes that are diseased, harvested from dead vines, or damaged by frost. According to the USDA, diseased tomatoes, or those that are frost-damaged or harvested from dead vines may not develop the proper level of acidity for safe home canning.

--Always follow a research-tested, up-to-date recipe. The University of Wisconsin-Extension publication "Tomatoes Tart and Tasty" (B2605) was updated in 2008 to incorporate recent changes in the USDA Complete Guide to Home Canning. It is available online at <http://learningstore.uwex.edu/pdf/B2605.PDF>

And what about potatoes? "Use firm, disease-free potatoes for canning or freezing," says Ingham.

Potatoes showing signs of late blight infection should not be used for home canning. Discard the whole potato rather than cutting off diseased portions since the fungus may spread to the interior. Since potatoes are a low-acid food, they should be pressure processed. Up-to-date recipes for vegetable canning in Wisconsin can be found in the UW-Extension publication "Canning Vegetables Safely" (B1159) and online at <http://learningstore.uwex.edu/pdf/B1159.PDF>

For complete food preservation information, visit <http://www.foodsafety.wisc.edu>

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