

Sprouting Seeds at Home Safely

Extension Food Safety Fact Sheet- July 2018

Raw or lightly cooked sprouts are a common source of foodborne illness in the United States, particularly *Salmonella* and *E. coli* O157:H7 infections. In fact, the US Centers for Disease Control and Prevention (CDC) recommends that if people choose to eat sprouts, they should be cooked thoroughly to reduce the risk of illness. It is recommended that young children, elderly persons, or persons with weakened immune systems NOT eat raw sprouts.

In most outbreaks associated with sprouts, the seeds are typically the source of the bacterial contamination. The warm, humid conditions that sprouts are grown in are ideal for the growth of any harmful bacteria that may be present. Therefore, if you are interested in sprouting seeds at home, it is essential to follow the important steps listed below to help improve the safety of these sprouts. It is not wise to attempt sprout production in the summer unless the temperature of the room where the sprouts are can be kept at about 70F.

****Note that in both Kansas and Missouri, licensing is required to sell sprouts, even when sold direct to consumer or in small quantities. Growers selling sprouts must attend [Sprout Safety Alliance Training](#).*

- 1) Purchase the seed from seed suppliers that understand seed safety and specify that the seeds be certified pathogen-free¹. AND
- 2) Treat the seeds to reduce potential pathogens (this is highly recommended for home sprouters and a requirement for commercial sprout growers). A seed treatment method that works for one type of seed may not be as effective for another, because surface structure varies for different seed types. If you are concerned that the treatment might affect the germination rate, you may use a small amount of seed to test the germination rate before applying it to a larger batch. Two of the recommended methods include:
 - a) On your stovetop, heat a solution of 3% hydrogen peroxide (available at most drug stores) to 140F (check it with a clean, accurate cooking thermometer). Put the seeds that you plan to sprout in a small mesh strainer (if smaller volumes) and immerse it directly in the heated peroxide solution for 5 minutes. Swirl the strainer at 1-minute intervals to achieve uniform treatment. For larger volumes, stir the seed occasionally during the heating process. Use a thermometer to ensure the temperature of the solution is maintained at 140F throughout the treatment. Always discard the peroxide solution after each seed batch as its effectiveness will rapidly decline (from UC Davis publication 8151); OR
 - b) Soak the seeds to be sprouted in undiluted store-bought vinegar for 15 minutes.
- 3) Rinse the seed in running tap water for 1 minute. Place the rinsed seed in a container with enough tap water to cover the seed plus one inch. Then carefully skim off all floating seed, seed coat fragments, and other debris and dispose of them. Although skimming can be a tedious process, research has tied most contamination to these materials (From UC Davis publication 8151).

¹ Two current major US seed suppliers- International Sprout Supplier (www.sproutnet.com) and Caudill Seeds (www.caudillsprouting.com) have attended the Sprout Safety Alliance training.

- 4) Sprout the seeds in clean, sanitized containers/jars, well away from areas of food preparation, pets, and high household traffic. Sprouting containers and any utensils used in the sprouting process must first be thoroughly cleaned and then sanitized. To sanitize, follow the directions on the bleach or other sanitizer container (use plain, *not scented* laundry bleach) for sanitizing kitchen surfaces. Use ¾ cup of bleach per gallon of water (3 tablespoons per quart) and soak the container/jar for at least 5 minutes. Then rinse with clean water. (From UC Davis publication 8151). You may also sanitize them by boiling them in tap water for 10 minutes in a large pot. The cheesecloth or mesh screening used in step #7 should also be sanitized by boiling.
- 5) Cover seed with four times the volume of potable lukewarm water and let stand overnight.
- 6) Pour off water and rinse thoroughly, pouring off last wash water.
- 7) Cover jar top with cheesecloth or quarter-inch mesh screening. Tie securely.
- 8) Invert jar in a pan and place in cupboard or dark place, in a slightly tilted position, so that excess water can drain away.
- 9) At least three times a day or every four hours, place jar under flowing water tap or pour on plenty of cool water to wash away molds or bacteria that may have developed. Return jar to inverted position. Changing the water regularly (and having clean hands, surfaces and utensils while doing it) is very important to keep the sprouts safe.
- 10) In three to four days at room temperature, the sprouts will be one to two inches long and ready for use. Pour sprouts into clean, cold water and shuck off skins.

References/ resources available:

- Sprouts: What you Should Know. Available from: www.foodsafety.gov/keep/types/fruits/sprouts.html
- Growing Seed Sprouts at Home. University of California- Davis College of Agriculture and Natural Resources Publication 8151. Trevor Suslow and Linda Harris
- The Sprout Safety Alliance website: www.iit.edu/ifsh/sprout_safety/
- Sprouting Beans. Kansas State Research and Extension publication. Available from: <https://hnr.k-state.edu/doc/hort-tips/Sprouting%20Beans.pdf>
- KSU/MU Extension Produce Safety website: www.ksre.k-state.edu/foodsafety/produce/index.html

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