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Editorial

A Note on Food Spoilage

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DESCRIPTION

Food spoilage is the process by which a food product becomes unfit for consumption by the consumer. The cause of such a process is due to a variety of external factors as a result of the product's type, as well as how the product is packaged and stored. Every year, one-third of the world's food produced for human consumption is lost due to food spoilage. Bacteria and various fungi cause spoilage, which can have serious consequences for consumers, but there are preventive measures that can be taken. Bacteria are responsible for some food spoilage. When bacteria break down food, acids and other waste products are produced. While the bacteria themselves may or may not be harmful, their waste products may be unpleasant to taste or even harmful to one's health. Pathogenic bacteria are classified into two types that attack different types of food. *Clostridium botulinum* , which targets meat and poultry, and then *Bacillus cereus* , which targets milk and cream, are the two types. When organisms are stored or exposed to unruly conditions, they begin to reproduce rapidly, releasing harmful toxins that can cause severe illness, even when cooked safely. Fungi have been viewed as a method of food spoilage, causing only an unappealing appearance to food; however, there has been significant evidence of various fungi being a cause of death for many people in many places around the world for hundreds of years. Fungi are caused by acidifying, fermenting, discoloring, and disintegrating processes and can produce fuzz, powder, and slime balls in a range of colors such as black, white, red, brown, and green. Mold is a type of fungus, but the two terms are not synonymous; they each have distinct characteristics and perform distinct functions. Molds such as *Aspergillus* and *Penicillium* are well-known for producing a variety of colored fuzz, powder, and slime. Varieties of prevention methods can be used to completely prevent, delayed, or otherwise reduce food spoilage. A food rotation system employs the First In First Out (FIFO) principle, which ensures that the first item purchased is also the first item consumed. Preservatives can extend the shelf life of food, allowing it to be harvested, processed, sold, and kept in the consumer's home for an extended period of time. The process of drying out or dehydrating food is an age-old technique for food preservation that helps to prevent mould and fungus growth. While it is possible that it will develop a fungus that is specific to dried food products, the chances are slim. Other methods besides drying include salting, curing, canning, refrigeration, freezing, preservatives, irradiation, and high hydrostatic pressure. Refrigeration can extend the shelf life of certain foods and beverages, but it does not extend it indefinitely. Freezing can extend the life of food even further, but it has limitations. Canning food, whether done at home or commercially, can keep food fresh for an extended period of time. Canned food is vacuum packed to keep oxygen out of the can, which is required by bacteria in aerobic spoilage. Canning has limitations and does not keep food for an indefinite period of time. Lactic acid fermentation also preserves and protects food from spoilage.

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