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Effect of food spoilage bacteria on food

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Food spoilage can be described as the process by which food quality becomes compromised and its edibility significantly reduced. Numerous signs are indicative of food spoilage and they range from changes in the ordinary appearance of the foods, changes in its texture, bad odor and poor taste. Although some spoiled foods may be consumed without causing harm, most of them are toxic in essence and may result in serious health complications. Microorganisms such as bacteria, insect larvae and fungi are responsible for food spoilage. Even with the present day preservation methods, food spoilage remains to be a significant problem in the contemporary food industries. Bacteria have the unique ability to form structures that are extremely resistant to harsh environmental conditions. These spores are resistant to freezing, high temperatures and other forms of drying. This makes them escape conditions in the conventional preservation techniques leading to the rotting of food. Some of the most common spore forming bacteria that resistant to various preservation methods belongs to the genus *Bacillus* and *Clostridium*. According to Doyle (2009), other species such as *Erwinia carotovora* are responsible for soft-rot type common in tomatoes. Additionally, blue mold rot in tomatoes is known to be caused by *Fusarium* as well as *Penicillium* species of bacteria. *Pseudomonas* spp. which typically grows at a temperature of 4 °C is also responsible for a significant portion of food spoilage. Two species of *Pseudomonas*, *P. fragi* and *P. putrefaciens* are chiefly responsible for the kind of spoilage that occurs in fermented milk products such as butter and cheese. *Campylobacter butyricum* and *Campylobacter sporogenes* have also been reported to cause this sort of decomposition. *Botrytis cinerea* and *Guignardia bidwellii* take credit for the kind of spoilage occurring in grapes and strawberry. *Guignardia bidwellii* cause big mummy rot in grapes. Therefore, it is evident that bacteria are a threat to food security.

Biography

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